

國立高雄科技大學
資訊工程系碩士班
碩士論文

使用開源醫藥資料庫探討心血管疾病相關藥物
對嚴重型精神疾病的影響

Exploring the Impact of Cardiovascular
Disease-Related Medications on Severe Mental Ill-
ness Using an Open-Source Medical Database

研究生：蔡耀霆

指導教授：楊孟翰 博士

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茲為保障著作人著作權益，並就論文著作權之歸屬及事後權利行使方式，包括論文應如何公開發表、發表時應如何標示著作人姓名、論文事後可作何種修改以及未來應如何授權他人利用等事項，碩、博士生與指導（含共同指導）教授依下列原則達成協議：

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使用開源醫藥資料庫探討心血管疾病相關藥物對嚴重型精神疾病的影響

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摘要

在求學與探索跨領域知識的過程中，能夠深刻體會到醫學資料與資訊工程相互結合所蘊含的巨大潛能。這份研究源於臨床資料中觀察到的現象，像是在眾多患有嚴重精神疾病的患者中，通常使用特定藥物來改善患者的症狀，而這次將根據心血管疾病藥物是否同時影響其預後風險來分析，因此，本次研究將探討心血管疾病相關藥物對嚴重型精神疾病（包括精神分裂症與躁鬱症）患者臨床結果的影響，尤其針對缺血性與出血性中風之發生風險進行深入分析。而關於研究資料的來源則是透過公開醫療資料庫 **Medical Information Mart for Intensive Care IV 2.1 (MIMIC-IV 2.1)** 進行跨領域資料查詢與統計分析，將有助於揭示藥物使用策略在不同臨床情境中的潛在效益與風險。

本論文採用資料庫檢索與統計檢定相結合的方法，首先從 MIMIC 資料集中提取符合精神分裂症與躁鬱症診斷之成年患者，並依據住院原因進一步劃分為缺血性中風與出血性中風等資料集。分析過程中，以平均及中位數年齡的 t 檢定、Mann-Whitney U 檢定與 Kolmogorov-Smirnov (KS) 檢定比對年齡分佈，並利用卡方檢定與 Fisher 精確檢定評估性別、事件及其他共病因素之差異；此外，採用 Kaplan-Meier 存活分析、對數秩檢定、比例風險模型與 ANOVA，深入探討各類心血管藥物（Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin）對患者預後的影響。

結果顯示，案例組與對照組在年齡分佈、性別比例、事件率及各項共病負擔上均達高度顯著差異；在比例風險模型的二元共變因模型中，對於缺血性中風患者，心血管藥物「是否使用」指標未顯示出顯著保護性效應；相較之下，出血性中風患者之二元共變因部分藥物則顯示保護性趨勢；數值型共變因分析雖顯示用藥次數、劑量及用藥時長與風險呈一致正相關，但 ANOVA 分析發現，這些細分指標雖在 F 值上達統計顯著，對比例風險模型整體解釋力的貢獻，卻不及二元是否用藥指標在出血性中風情境下的穩健性，也進一步證實案例組患者在「是否使用心血管藥物」對生存差異的高度解釋能力。

綜合而言，本研究證實了心血管用藥在嚴重型精神疾病患者中對中風預防與管理的複雜且顯著影響，其中對於缺血性中風，「是否使用特定藥物」二元指標並未顯示保護效應；而在出血性中風情境下，二元指標則具較佳的解釋力。相較之下，細分至用藥次數、劑量或時間的數值型指標，雖在 ANOVA 分析中達統計顯著，卻僅對模型貢獻有限；本研究結果仍可作為臨床藥物選擇與風險評估模型優化的實證基礎。

此外，本論文除了在臨床統計分析方法上提供一套完善的操作框架外，同時建立了一個包含疾病及藥物 SQL 查詢範例的網頁平台，有效推動公開資料庫於跨領域研究的應用，為後續相關研究提供了技術支援與實務參考。

Exploring the Impact of Cardiovascular Disease-Related Medications on Severe Mental Illness Using an Open-Source Medical Database

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ABSTRACT

The pursuit of interdisciplinary knowledge has revealed the immense potential in integrating medical data with information engineering. This research originates from clinical observations, particularly among patients with severe mental illnesses who often receive specific medications to alleviate their symptoms. The present study aims to analyze whether cardiovascular medications simultaneously affect their prognostic risks. Specifically, it investigates the impact of cardiovascular-related drugs on clinical outcomes in patients diagnosed with severe mental illnesses, including schizophrenia and bipolar disorder, with a focused analysis on the risks of ischemic and hemorrhagic stroke.

Data for this study were obtained from the publicly available Medical Information Mart for Intensive Care IV version 2.1 (MIMIC-IV 2.1). Through cross-disciplinary data queries and statistical analyses, the potential benefits and risks of pharmacological strategies in various clinical contexts are explored. The methodology integrates database retrieval and statistical testing. Adult patients diagnosed with schizophrenia or bipolar disorder were identified from the MIMIC dataset and further categorized based on their hospitalization causes into ischemic or hemorrhagic stroke cohorts. Statistical tests including t-tests, Mann-Whitney U tests, and Kolmogorov-Smirnov (KS) tests were applied to compare age distributions, while chi-squared tests and Fisher's exact tests were used to evaluate differences in gender, event rates, and comorbidities. Kaplan-Meier survival analysis, log-rank tests, proportional hazards models, and ANOVA were employed to examine the prognostic influence of various cardiovascular medications (Aspirin, Warfarin, Clopidogrel, Apixaban, Rivaroxaban, Dabigatran etexilate, Cilostazol, Enoxaparin).

The results revealed significant differences between case and control groups in terms of age distribution, gender ratio, event incidence, and comorbidity burden. In the binary covariate model of the proportional hazards analysis, the “medication usage” indicator did not demonstrate a protective effect for ischemic stroke patients. In contrast, for hemorrhagic stroke, certain medications showed a protective trend in the binary covariate model. While numerical covariate analysis indicated a positive correlation

between stroke risk and drug usage frequency, dosage, and duration, ANOVA results, though statistically significant, contributed less explanatory power to the overall model compared to the binary usage indicator in the hemorrhagic stroke context. This suggests a strong explanatory capacity of the binary medication usage indicator for survival differences in the case group.

In conclusion, the study confirms the complex and significant influence of cardiovascular medications on stroke prevention and management among patients with severe mental illnesses. While the binary indicator for medication usage showed limited protective effect for ischemic stroke, it demonstrated stronger explanatory power in hemorrhagic stroke scenarios. Although dosage-related variables achieved statistical significance in ANOVA, their overall contribution to the risk model was limited. The findings provide empirical support for clinical medication selection and optimization of risk assessment models.

Additionally, this study offers a comprehensive statistical framework for clinical analysis and presents a web-based platform featuring SQL query examples for diseases and medications, thereby promoting the application of public medical databases in interdisciplinary research and providing technical and practical references for future studies.

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我一開始對於大學畢業前並沒有太多的想法，但是我的家人們告訴我，只有要有能力就繼續，而當時我的同學們也陸續找到自己的目標，至於對未來迷惘的我，在一次與大學班導討論專題的時候，班導告訴我要往高處走，這句話給了我繼續就讀研究所的力量，而這位班導也就是我的指導教授楊孟翰老師，謝謝老師，您在我大學時期給了我機會參與各項研究，讓我在撰寫程式的能力方面成長了許多，希望未來我能夠把老師您交給我的各項技術，在職場上發揚光大。

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一、緒論

1.1 研究背景

嚴重型精神疾病（severe mental illness, SMI），主要包括精神分裂症（schizophrenia）、思覺失調光譜障礙各亞型（schizophrenia spectrum disorders）與躁鬱症（bipolar disorder）等，為一組嚴重影響全球精神健康的慢性疾病，其核心特徵為持續或反覆發作的精神病症狀與社會功能障礙[1,2,3]。根據一項涵蓋十三項隊列研究的統合分析，嚴重型精神疾病患者之心血管疾病（cardiovascular disease, CVD）發病風險較一般人群高出約 1.53 倍，中風（stroke）風險提高至 1.71 倍，並且心衰竭（CHF）風險亦顯著增加[1,4,5]。此現象背後機制複雜，除抗精神病藥物誘發之代謝症候群（metabolic syndrome）與生活型態因子外，還可能與慢性精神壓力導致之交感神經活性增高有關[6]。

在一般心血管疾病預防與治療中，抗血小板藥物如阿司匹林（Aspirin）及氯吡格雷（Clopidogrel），以及抗凝血劑如華法林（Warfarin）與新型口服抗凝劑（non-vitamin K antagonist oral anticoagulants, NOACs），均已被證實可在高風險族群中將缺血性中風（ischemic stroke）發生率降低 60–65%[7,8]，並伴隨較低之顱內出血風險[7]。

儘管上述證據充份支持這些藥物於一般族群之保護效益，但針對嚴重型精神疾病患者之特定用藥效益與風險評估卻明顯不足。已有研究指出，與非精神疾病患者相比，合併心房顫動（atrial fibrillation, AF）的精神分裂症患者在抗凝治療起始率上明顯偏低，且出血與栓塞相關不良事件風險增加[9]。此外，少數小型臨床試驗探討阿司匹林作為輔助療法對精神症狀的影響，結果對心血管預防效益並未提供足夠證據[10]。

氯吡格雷於缺血性中風次級預防中具核心地位，但在嚴重型精神疾病族群的真實世界使用情形及其對中風與出血性事件風險的平衡，仍缺少大型資料庫分析與嚴謹統計驗證[27]。另一方面，NOACs 由於用藥劑量穩定、監測需求低而逐漸取代華法林，但在嚴重型精神疾病患者的安全性與療效尚未被深入研究[7,9]。

綜上，目前文獻僅零星探討嚴重型精神疾病患者心血管用藥之單一藥物效果，缺乏涵蓋多種藥物且區分缺血性與出血性中風之整體性分析。為填補此一研究缺口，本研究將採用公開醫療資料庫 MIMIC-IV 2.1[37]，整合跨領域 SQL 查詢與多元統計檢定，深入比較不同心血管用藥對嚴重型精神疾病患者中風預後之影響，並區分缺血性及出血性中風事件，期望提供臨床決策具體實證依據，以便在未來能透過此研究結果來改善相關疾病與用藥的醫療資源，讓醫生能夠更加值觀針對特定疾病來制定完整的醫療策略[38,42]。

1.2 研究動機與方法簡介

嚴重型精神疾病患者因病程長期複雜，不僅本身生活品質與認知功能受損，更常合併高血壓、心臟病、糖尿病與高血脂等心血管危險因子，過去文獻主要聚焦於這些患者整體心血管死亡率及住院率的提升，對於他們在接受抗血小板與抗凝血治療後，缺血性或出血性中風的具體發生風險與長期生存預後的實證量化仍相對不足。本研究嘗試從臨床真實世界電子病歷切入，利用具備多元診療訊息與用藥紀錄的 MIMIC-IV 2.1 資料庫，以大規模樣本與嚴謹的統計模型，全面評估 Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin 等心血管用藥在嚴重型精神疾病患者中風事件發生率、生存時間分布及相對風險上的差異效應，期望為臨床上用藥抉擇提供更具體的實證依據，並為未來在更廣泛的精神疾病族群中檢驗心血管藥物策略奠定方法論基礎。

本研究自 MIMIC-IV 2.1 電子病歷中篩選出符合嚴重型精神疾病診斷碼 (International Classification of Diseases-9/10, ICD-9/10) 的成年住院患者，進一步依住院主因將樣本分為嚴重型精神疾病案例組與沒有精神疾病的對照組，而缺血性中風組與出血性中風是將資料分為兩個主題的事件，並且為了模擬實際狀況，排除可能因心血管疾病住院的樣本患者而住院之對照案例，以降低混雜偏差。資料提取涵蓋患者的人口學資訊、主要及次要診斷欄位、共病歷表，以及各類心血管用藥物的紀錄（含劑量、用藥次數與時間戳記），並透過標準化 SQL 查詢範例與資料清理流程確保分析一致性與可重現性。此外，為利後續研究者快速掌握 MIMIC-IV 2.1 中與疾病及藥物相關的欄位結構與 SQL 查詢範例，目前已建置線上平台，收錄疾病與藥物範例查詢方法，提供完整的欄位映射與程式碼協助。

在統計方法上，首先評估案例組與對照組於研究資料的可比性：以 t 檢定比較平均年齡、Mann-Whitney U 檢定比較年齡中位數、Kolmogorov-Smirnov 檢定檢驗年齡分布差異；性別與高血壓、心臟病、神經類型疾病、糖尿病、高血脂等共病分布則分別以卡方檢定與 Fisher 精確檢定進行群組間差異檢驗[41]。接著針對各種藥物使用情形，分析不同用藥組別在使用比例、用藥次數、劑量分布及用藥時間上的差異，並評估其與中風事件關聯性的初步趨勢。

生存分析部分，採用 Kaplan-Meier 估計各組別事件（缺血性或出血性中風）發生後的存活函數曲線，並以對數秩檢定檢驗案例組與對照組間曲線差異是否具有統計意義；最後以 Cox 比例風險模型量化各種心血管用藥對中風事件發生風險的相對風險比 (Hazard Ratio) [39]，同時納入年齡、性別與主要共病等混雜因子作為協變量，並透過情境敏感性分析檢驗結果穩健性[40]。整體研究設計意在結合大數據與嚴謹統計，提供嚴重型精神疾病患者在心血管事件預防與治療策略上的實證參考。

1.3 論文架構

本論文在第一章中鋪陳嚴重型精神疾病與心血管併發症交互影響的背景，說明研究動機並概述所採用的資料庫檢索與統計分析方法；接著第二章透過生存分析、Kaplan-Meier 估計、對數秩檢定與 Cox 比例風險模型與 ANOVA 等理論基礎的梳理，與心血管藥物在一般族群及嚴重型精神疾病患者中之臨床實證回顧，奠定後續實證分析的學理根基；第三章則細緻描述 MIMIC-IV 2.1 資料庫中嚴重型精神疾病患者樣本的篩選條件與共病變數提取流程，並具體說明以 t 檢定、U 檢定、KS 檢定、卡方檢定及 Fisher 精確檢定檢驗，以及 Kaplan-Meier 曲線與 Cox 比例風險模型的參數設定跟 ANOVA 的參數設定；第四章呈現各項分析結果，依序以統計檢定表格與存活曲線圖示，揭示不同心血管藥物對缺血性與出血性中風風險及存活期之影響，並輔以實際情境分析驗證結果穩健性；最後在第五章綜合探討研究發現，回顧心血管用藥在嚴重型精神疾病患者中的雙面效應，提出具體臨床用藥建議與後續研究方向，並介紹所建置之 SQL 查詢範例平台如何協助跨領域研究者快速上手。

二、文獻回顧

2.1 生存分析

生存分析 (survival analysis) 是一種專門處理「時間至事件」(time-to-event) 資料的統計方法，廣泛應用於醫學、公共衛生與社會科學等領域，用以探討患者從觀察起始至特定事件（如死亡、中風、復發等）發生之時間分布。其核心目的在於估計並比較不同群體之存活函數 (survival function) 和風險函數 (hazard function)，並考量常見的資料刪失 (censoring) 與時變共變數 (time-dependent covariates) 等複雜因素，以獲得對個體預後的全面理解。

首先，生存分析的關鍵指標為存活函數 $S(t)$ 與危險函數 $h(t)$ 。存活函數定義為個體在時間 t 之後仍未發生事件的概率，如公式(1)：

$$S(t) = P(T > t) \quad (1)$$

其中 T 為事件發生的隨機時間。危險函數則代表在時間 t 時刻，尚未發生事件的個體瞬間發生事件的條件風險率，如公式(2)：

$$h(t) = \lim_{\Delta t \rightarrow 0} \frac{P(t \leq T < t + \Delta t | T \geq t)}{\Delta t} \quad (2)$$

透過這兩個函數的特性，可揭示不同群組在時間上的生存趨勢與風險變化，並支撐後續的假設檢定與模型構建[14]。

其次，刪失 (censoring) 是生存分析不可或缺的考量。最常見的右刪失 (right censoring) 代表在研究結束時，部分個體尚未觀察到事件發生；此外尚包括左刪失 (left censoring) 與區間刪失 (interval censoring)，需分別採用適當的方法進行處理，以避免樣本不完整導致估計偏差。對於本研究而言，當事件未發生，或即使事件發生後診斷表未收錄其後續記錄而無法追蹤時，視為右刪失資料。

接著，要比較不同處理或暴露群組的生存分布，常採用對數秩檢定 (log-rank test) 評估存活曲線之間是否具有統計學差異；而若需同時調整多項協變量對風險的影響，則以 Cox 比例風險模型 (Cox proportional hazards model) 作為主要工具。Cox 模型將危險函數表述，如公式(3)：

$$h_i(t) = h_0(t) \exp(\beta_1 x_{i1} + \beta_2 x_{i2} + \cdots + \beta_p x_{ip}) \quad (3)$$

其中 $h_0(t)$ 為基準危險函數， β 為各協變量 x 的回歸係數。此模型之優勢在於無須事先假設基準危險函數的具體形式，且能靈活納入時間固定或時間變動的共變數，適用於複雜臨床資料的風險因子篩選與量化[15]。

最後，過去研究已廣泛應用生存分析於精神疾病與心血管併發症之交互影響評估。例如，某些小型臨床試驗衡量阿司匹林對精神症狀影響，亦有研究利用大型資料庫探討精神分裂症患者合併房顫後接受抗凝治療之存活結局。但多聚焦於單一藥物或單一事件類型，尚缺乏涵蓋多種心血管用藥並區隔缺血性與出血性中風的整合性分析。

本研究將依據上述生存分析理論架構，結合 Kaplan-Meier 存活曲線、對數秩檢定與 Cox 比例風險模型，從 MIMIC-IV 2.1 資料集中探討不同心血管用藥對嚴重型精神疾病患者中風事件之發生風險與存活結果，期盼補足現有文獻之不足，並為臨床決策提供更具體的實證依據。

2.1.1 Kaplan-Meier 估計量

本節將以更自然流暢的方式，說明 Kaplan-Meier 估計量的核心概念、數學表述、繪圖方式，以及如何處理右刪失資料，並說明本研究如何利用它來比較不同心血管用藥組別的存活差異[11]。

Kaplan-Meier 估計量是一種非參數的生存分析方法，能在不假設基礎風險函數形式的前提下，利用含有右刪失（censoring）資料的樣本來估計整體存活函數。

其基本理念是：在每一個觀察到事件（如死亡、中風）發生的時間點，計算當時存活於風險集中的個體中，有多少比例仍未發生事件，然後將這些階段性的生存率相乘，累積出至某一時間 t 的存活機率。

數學上，若第 i 個事件發生在時間 t_i ，當時共有 n_i 人處於風險集中，而 d_i 人在該時刻發生事件，則存活函數的估計值，如公式(4)：

$$\hat{S}(t) = \prod_{i: t_i \leq t} \left(1 - \frac{d_i}{n_i}\right) \quad (4)$$

繪圖時，Kaplan-Meier 曲線以階梯狀（step function）方式呈現：每遭遇一次事件，曲線就會向下跳躍相應的幅度；當有樣本因右刪失離開風險集，則會於該時間點標示一個小刻記（tick mark），以示該受試者之後不再納入追蹤。

在臨床研究中，常將不同組別的 Kaplan-Meier 曲線並列，以直觀比較其存活差異；若要檢驗這些差異是否具有統計意義，則可進一步搭配對數秩檢定（log-rank test）。此外，從 Kaplan-Meier 曲線上可直接讀取中位生存時間（median survival time）或任一特定時點的存活率，為臨床決策與預後評估提供具體參考。

本研究將依據上述方法，繪製並比較接受不同心血管用藥的嚴重型精神疾病患者，在發生缺血性及出血性中風後的存活曲線，進一步探討藥物對患者預後的影響[11]。

2.1.2 對數秩檢定

對數秩檢定 (log-rank test) 是一種常用的非參數檢定方法，用來比較兩組或多組的存活分布是否顯著不同，其基本思路是在每一個事件時間點，構建如下的風險集列聯表，計算觀察到的事件數與根據風險集中各組比例所推算的期望事件數之差，並累積為整體檢定統計量[12]如表 2.1：

表 2.1 風險集列聯表

| | 案例組 n_{1j} | 對照組 n_{2j} | 合計 $N_j = n_{1j} + n_{2j}$ |
|----|-------------------|-------------------|----------------------------|
| 事件 | d_{1j} | d_{2j} | $d_j = d_{1j} + d_{2j}$ |
| 存活 | $n_{1j} - d_{1j}$ | $n_{2j} - d_{2j}$ | $N_j - d_j$ |
| 合計 | n_{1j} | n_{2j} | N_j |

在每一個事件時間點 t_j ，第 k 組的期望事件數計算，如公式(5)：

$$E_{kj} = d_j \times \frac{n_{kj}}{N_j} \quad (5)$$

其中 d_j 為該時刻所有組的總事件數， n_{kj} 為第 k 組的風險集中人數；該表即為計算 E_{kj} 所依據的「事件／存活」分佈[13]。接著，對每一組累積所有時間點的 $O_k - E_k$ 差值 ($O_k = \sum_j d_{kj}$ 為觀察事件總數)，並根據其變異數 V_k 組成近似服從卡方分布的檢定統計量，如公式(6)：

$$\chi^2 = \sum_k \frac{(O_k - E_k)^2}{V_k} \quad (6)$$

當 χ^2 對應的 p 值低於預設顯著水準（通常取 0.05）時，即可拒絕「各組生存函數無差異」的虛無假設，表明不同群組之間在整體存活分布上具有統計顯著差異[12]，透過這樣的流程與表格演示，可以更清晰地理解，對數秩檢定如何在每一個事件時間點評估「觀察事件」與「期望事件」之間的偏差，並以累積方式進行全時段的群組比較。

2.1.3 比例風險模型

在生存分析中，比例風險模型由 Sir David R. Cox 於 1972 年提出（“Regression Models and Life-Tables”），是一種利用「非參數」基礎危險函數 $h_0(t)$ 與「參數」協變量效應 β 結合的半參數迴歸方法，用以估計多個協變量對事件發生瞬時危險率的影響[15]。數學上，對第 i 位受試者在時間 t 的危險函數表示為公式(7)：

$$h(t | \mathbf{X}_i) = h_0(t) \exp(\beta_1 X_{i1} + \cdots + \beta_p X_{ip}) \quad (7)$$

其中 $h_0(t)$ 為不需假設分布形式的基礎危險函數， \mathbf{X}_i 為第 i 位受試者的協變量向量， β 則為待估計之回歸係數向量[16,17]。

在參數估計方面，Cox 採用「偏似然」（partial likelihood）技巧，僅利用觀察到事件的個體在其風險集 R_i 中的相對風險來建構似然函數，形式為公式(8)：

$$L(\beta) = \prod_{i \in D} \frac{\exp(\mathbf{x}_i \cdot \beta)}{\sum_{j \in R_i} \exp(\mathbf{x}_j \cdot \beta)} \quad (8)$$

其中 D 為所有事件發生個體的索引集合，此方法可在不估計 $h_0(t)$ 的情況下直接獲得 β 的最大似然估計[18]。模型假定不同個體之間的危險比（hazard ratio），如公式(9)：

$$\frac{h(t|\mathbf{x}_i)}{h(t|\mathbf{x}_j)} = \exp[(\mathbf{x}_i - \mathbf{x}_j) \cdot \beta] \quad (9)$$

為時間不變的常數，此「比例危險」假設可透過 Schoenfeld 殘差或時間交互項檢驗其合理性[19,20]。

本研究中，對四組不同資料集（含排除可能因心血管疾病住院的樣本患者的資料集）皆套用 Cox 模型，將符合嚴重型精神疾病、年齡、性別及高血壓、心臟病等共病情況納入協變量，並對每種心血管用藥（劑量、使用率、使用時間）進行調整後危險比估計[18,21]，最後評估不同用藥對缺血性或出血性中風發生風險的影響。

2.2 心血管疾病藥物分類

在心血管疾病與中風的預防與治療中，抗血小板與抗凝血藥物分別透過抑制血小板聚集及干預凝血瀑布反應來減少血栓形成，二者互為補充，成為臨床上最核心的用藥策略。

抗血小板藥物部分，可根據作用機制分為三大類：血小板聚醣蛋白抑制劑（glycoprotein IIb/IIIa inhibitors）、血小板聚集抑制劑（包括 Aspirin、Clopidogrel、Cilostazol、Prasugrel、Ticagrelor 等）、與蛋白酶活化受體-1 拮抗劑（PAR-1 antagonists，如 Vorapaxar）[22]。Aspirin 透過不可逆抑制環氧化酶-1（COX-1），降低血小板內 TXA₂ 合成，以每日 75–325 mg 為常用劑量，用於缺血性中風二級預防等多種心血管適應症[23]；Clopidogrel 作為 P2Y₁₂ 受體拮抗劑，可顯著減少 ADP 介導的血小板活化，典型劑量 75 mg/日，廣泛應用於冠狀動脈支架植入後的抗血栓治療[22]；Cilostazol 則透過磷酸二酯酶-3（PDE3）抑制作用提升血小板與血管平滑肌細胞內 cAMP 水準，除抑制血小板聚集外，亦具血管舒張與抑制新生內膜增生之效果，特別在周邊動脈病變與缺血性中風次級預防中備受重視[24]。

抗凝血藥物可再細分為三大類：肝素類（含未分次肝素 UFH、低分子量肝素 LMWH 如 Enoxaparin、合成五糖抑制劑 Fondaparinux）、維生素 K 拮抗劑（Vitamin K Antagonists，以 Warfarin 為代表）以及直接口服抗凝血劑（DOAC/NOAC）。肝素類通過活化抗凝血酶 III (AT III) 來抑制凝血因子（如 Xa、IIa）活性，作用快速且半衰期短，常用於靜脈注射或皮下注射，但需監測 aPTT 或 anti-Xa 活性以維持療效與安全[25]。Warfarin 透過抑制維生素 K-依賴性凝血因子合成（II、VII、IX、X），口服用藥便利，但由於飲食與藥物交互作用眾多，須依靠 INR 監測以維持治療窗[26]。

自 2000 年代以降，非維生素 K 口服抗凝血劑（NOAC/DOAC）因劑量固定、不需常規監測及較少與食物或其他藥物交互作用的優勢，逐步取代 Warfarin。這類藥物可分為直接凝血酶抑制劑（Dabigatran）與直接 Xa 因子抑制劑（Rivaroxaban、Apixaban、Edoxaban 等），在房顫中風預防及深靜脈血栓栓塞症（VTE）等適應症中顯示出與維生素 K 拮抗劑相當甚至更佳的療效與安全性[27,28]。由於 Dabigatran etexilate 先需轉化，臨牀上並無純 Dabigatran 的口服劑型；所有市售口服製劑均以 etexilate 前驅藥形式提供，以確保可預測的生物利用度及穩定藥效[29]。根據最新指引，DOAC 不需監測凝血功能，且在腎功能正常者中可安心使用，但需留意腎功能不全患者之藥物累積風險[30]。

研究中所選取的八大心血管藥物——Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin——涵蓋完整的抗血小板與抗凝血策略，其不同的作用靶點與藥理特性將作為後續生存分析與比例風險模型中的關鍵協變量，以評估對嚴重型精神疾病患者中缺血性及出血性中風預後的綜合影響[31]。

三、研究方法

首先於「資料檢索」階段，透過對應 ICD-9/10 診斷碼與多表關聯，從 MIMIC-IV 2.1 中篩選出嚴重型精神疾病與缺血/出血性中風的案例組與對照組，並排除因心血管疾病入院的潛在混雜樣本；接著在「資料處理」階段，對原始欄位進行缺失值處理、異常值剔除與衍生變數（如存活時間 T、事件指標 E、用藥次數總和等）建置；完成後以多種「獨立性檢定」（t 檢定、Mann-Whitney U 檢定、Kolmogorov-Smirnov 檢定、卡方檢定與必要時的 Fisher 精確性檢定）評估案例組與對照組於年齡、性別及共病狀況上的差異；之後進入「生存分析參數設定」，處理右刪失資料、設定 Kaplan-Meier 曲線與階梯跳躍標註規則，於解構式對數秩檢定中定義風險集/累積統計量計算方式，並在 Cox 比例風險模型中納入主要協變量及交互項、檢驗比例危險假設；最後透過「分析流程整理」將以上各階段串連成可重現的 SQL 查詢與統計方法，並以流程圖與版本控制記錄關鍵決策，確保方法透明且便於後續驗證。

3.1 資料檢索

在資料檢索階段，以 MIMIC-IV 2.1 資料集為主要資料來源，透過預先定義之 ICD-9/10 診斷碼範圍，鎖定所有嚴重型精神疾病診斷的成年住院患者樣本。首先，藉由 diagnoses_icd 資料表中對應 ICD-9 及 ICD-10 之診斷碼，擷取符合嚴重型精神疾病條件的患者識別碼，並與 patients 及 admissions 資料表進行關聯，以取得患者基本資訊與住院的起迄時間。此步驟確保所有案例組樣本均為第一次進行精神疾病住院之紀錄，排除重複入院或資料不完整者。

接著，為區分缺血性與出血性中風事件，本研究利用 diagnoses_icd、admissions、diagnosis、edstays 四大資料表交叉篩選出在住院期間因中風住院的患者。針對缺血性中風，鎖定 ICD-9 及 ICD-10 診斷碼；而出血性中風則依據 ICD-9 及 ICD-10 診斷碼。透過 SQL 查詢，不僅能確認中風事件發生的日期，還能將中風作為後續生存分析中的起始事件時間，並在篩選完成後將該事件時間與住院的起迄時間結合，形成完整的時間至事件資料，關於詳細的 SQL 查詢語法與步驟，請至本論文的附錄一查閱。

為了模擬臨床真實情境並控制潛在混雜因子，本研究進一步排除可能因心血管疾病住院之對照組樣本。具體做法是在對照組中，統計每位患者住院期間所有診斷欄位優先順序中出現的前三名診斷，若前三名診斷中包含「缺血性中風」或「出血性中風」相關診斷碼，且在照組中的患者最早入院時間，是因事件發生而入院，則將該患者樣本剔除，以降低住院原因與中風事件之混淆偏差。此篩除邏

輯經由 SQL 子查詢與分組計算實現（附錄一），確保對照組樣本未受心血管疾病而住院的患者影響。

在完成初步篩選後，本研究進一步從 *prescriptions* 資料表中萃取各類心血管用藥紀錄。利用心血管藥物名稱，檢索對應患者使用藥物的紀錄如 Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol 及 Enoxaparin，擷取使用次數、用藥時間與劑量資訊，並與案例組及對照組的住院紀錄合併，形成最終的分析資料集。在此過程中，針對任一欄位缺失或明顯異常者，依照事前訂定之資料清理規範進行補值或剔除，以維持資料品質。

整體而言，從嚴重型精神疾病患者篩選、缺血性及出血性中風事件定義、心血管藥分析，到對照組潛在樣本排除與用藥紀錄整合，本研究的資料檢索流程嚴謹遵循標準化 SQL 查詢範例（附錄一），並結合臨床領域專家意見，確保所獲取之資料既具代表性，又能有效控制潛在偏差，為後續獨立性檢定與生存分析奠定堅實基礎。

3.2 資料處理

在完成資料檢索後，首先進行資料前處理與清理，確保所有欄位的一致性與完整性。原始 MIMIC-IV 資料表中，診斷與用藥欄位常因紀錄方式差異而出現缺失或異常值，對於少量且無法補值的異常紀錄則予以剔除，以避免偏差。此外，在傳統生存分析中，「事件」通常指死亡，但本研究聚焦於疾病間的相關性，故將「是否被診斷出目標疾病」視為事件：若診斷表中出現該疾病，即記為事件發生；若未見相關診斷或後續紀錄缺失，則視為右刪失（right censoring）。

事件追蹤的起點稱為索引日期（Index Date），在案例組中將索引日期設置為目標疾病的首次住院日期；對照組因不具備該目標疾病，則以首筆住院日期作為索引。事件終點即事件日期（Event Date），理想情況下為目標疾病首次被診斷的當天；若該天沒有診斷紀錄或後續診斷未被收錄，即認定為追蹤不到事件，屬於右刪失，此時若患者已有死亡日期，則將死亡當天作為事件日期；若無死亡記錄，則以最後一次診斷所屬年度的 12 月 31 日替代。

生存時間（Survival Time）即事件日期減去索引日期所得到的天數。對於出院後仍在追蹤期內，但未發生事件的資料，一超出住院期間的觀察值，一律視為右刪失，以確保分析結果的準確性與一致性。

在衍生變數建置階段，根據每位患者的住院紀錄與診斷碼，生成三個核心欄位：生存時間 T、事件指標 E 以及分組變數 with_psychosis。T 表示從患者的住院首筆診斷日，到中風發生或死亡之間的天數，E 則以 TRUE/FALSE 表示是否觀察到缺血性/出血性中風事件，而 with_psychosis 則依照患者是否屬於案例組用 TRUE/FALSE 來表示。此外，由 *prescriptions* 資料表提取心血管藥物使用紀錄，包含用藥次數、劑量（單位：毫克）及用藥起訖時間（單位：小時），並依據藥物名稱，將八種心血管藥物使用紀錄分類後，合併至每位患者的資料集中，

而患者是否有使用心血管藥物，則以 TRUE/FALSE 表示，若患者有使用該藥物會將該藥物名稱欄位值以 TRUE 表示，並且對該患者使用藥物的劑量與用藥起訖時間做中位數、最大值、最小值、平均值等統計，且計算該藥物的使用次數，若患者未使用該藥物，則將該藥物名稱欄位值以 FALSE 表示，後續相關的欄位數值將以 0 為替代，最終形成完整分析檔。

在資料整合與分組標記時，依照四個主題（事件型態與對照組排除條件）對患者進行分組，並將之前定義的索引日期與藥物使用紀錄欄位一併納入。接著在對照組中，將入院當天診斷欄位優先順序為前三名的診斷，包含所排除的缺血性/出血性中風診斷，依照主題二與主題四的邏輯予以剔除，以避免因原發心血管疾病住院而影響分析結果。最後，將所有患者依照是否有嚴重型精神病、事件類型及是否被排除，標記為對應主題下的案例組或對照組，並合併心血管藥物使用的紀錄，以利後續執行獨立性檢定與 Cox 比例風險模型分析。

以下表 3.2 列出本篇論文所探討四個各項主題的定義：

表 3.2 各項主題的定義

| | 主題一 | 主題二 | 主題三 | 主題四 |
|-------------|------------------|--------------------|------------------|--------------------|
| 事件 | 缺血性中風 | 排除入院原因為缺血性中風之對照組患者 | 出血性中風 | 排除入院原因為出血性中風之對照組患者 |
| 案例組 | 嚴重型精神疾病 | 嚴重型精神疾病 | 嚴重型精神疾病 | 嚴重型精神疾病 |
| 對照組 | 沒有精神疾病 | 沒有精神疾病 | 沒有精神疾病 | 沒有精神疾病 |
| 案例組 索引日期 | 嚴重型精神病 首次診斷日期 | 嚴重型精神病 首次診斷日期 | 嚴重型精神病 首次診斷日期 | 嚴重型精神病 首次診斷日期 |
| 對照組 索引日期 | 首筆診斷 日期 | 首筆診斷 日期 | 首筆診斷 日期 | 首筆診斷 日期 |
| 心血管藥物 使用 | 合併心血管藥物使用紀錄 | 合併心血管藥物使用紀錄 | 合併心血管藥物使用紀錄 | 合併心血管藥物使用紀錄 |

在設定完上述主題定義之後，再次進行交叉檢查，確保每位患者樣本的「事件時間」、「右刪失狀態」及「藥物使用紀錄」皆正確對應其所屬主題，並將所

有處理過後的資料存成可供 R 或 Python 直接讀取的 CSV 與 PKL 檔，為下一步的統計檢定與生存分析做好完善準備。

3.3 獨立性檢定

在完成資料清理與分組後，為了檢驗案例組與對照組在研究開始時的基本資訊以及用藥情況之間的差異，是否具有統計學意義，本研究針對患者年齡、性別、事件發生率、共病狀況與各類心血管藥物使用情形，分別採用適合該變數型態的獨立性檢定方法進行分析。年齡變數方面，首先以 t 檢定比較兩組平均年齡，評估其是否存在顯著差異；同時運用 Mann-Whitney U 檢定檢驗年齡中位數，並透過 Kolmogorov-Smirnov 檢定進一步檢視整體年齡分布的形態差異，以確保年齡分布的微小偏移也能被精密捕捉。

在性別及事件 (Event) 等二元類別變數的比較上，考量樣本量較大時卡方檢定的適用性，本研究先行以卡方檢定評估兩組在性別分布及事件發生比例上的差異；對於樣本次數較少或預期次數低於五格的情況，則同時執行 Fisher 精確檢定以補足卡方檢定的限制，確保檢定結果的穩健度。共病項目如高血壓、心臟類型疾病、神經類型疾病、糖尿病及高血脂等，同屬二元分類變數，也依上述流程先後以卡方與 Fisher 精確檢定進行群組間盛行率的差異檢驗。

針對各心血管用藥 (Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin) 之使用比例、劑量、使用次數與用藥起訖時間等相關指標，依據指標型態分別採用卡方檢定 (或 Fisher 精確檢定) 檢驗使用比例差異，並以 t 檢定或 Mann-Whitney U 檢定比較劑量與使用次數的均值或中位數差異；若欲探究整體分布形態，則再輔以 KS 檢定評估兩組在該藥物使用模式上是否存在分布階層的顯著落差。透過上述多元檢定策略，本研究能全方位掌握案例組與對照組在基本資訊及用藥行為上的顯著差異，為後續生存分析及比例風險模型的協變量選擇與結果解讀，奠定堅實的方法學基礎。

3.3.1 t 檢定

本節將說明獨立樣本 Student's t 檢定如何用來比較案例組與對照組的平均年齡差異。當年齡這一連續變數在兩組中近似常態分布，且假定等變異數 (或在變異數不等時採用 Welch 修正) 時，計算 t 統計量，如公式(10)：

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s_p \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \quad (10)$$

其中 \bar{x}_1, \bar{x}_2 分別為案例組與對照組的樣本平均數， n_1, n_2 為各自的樣本數，合併樣本標準差 s_p 定義為公式(11)：

$$s_p = \sqrt{\frac{(n_1-1)s_1^2 + (n_2-1)s_2^2}{n_1+n_2-2}} \quad (11)$$

在虛無假設 $\mu_1 = \mu_2$ 成立下，該統計量服從自由度 $n_1 + n_2 - 2$ 的 Student's t 分布，這一分析框架最早由 “Student” 在 1908 年於 Biometrika 發表，專為小樣本推論而設計[32]。計算出 t 值後，藉由查表或統計軟體取得 p 值，並以顯著水準 $\alpha = 0.05$ 判定是否拒絕「兩組平均數相等」的虛無假設：若 p 值低於 0.05，即視為平均年齡差異具有統計學意義。

由於本研究中案例組與對照組的樣本量均大於 30，根據中央極限定理，即使母體分布略偏離常態，t 檢定仍具較佳的近似效度；若偵測到異質變異數，則可改用 Welch t 檢定進行自由度修正，以確保檢定結果的穩健性[33]。

此外，在本研究中運用 SciPy[34] 套件所提供的 ttest_ind 函數，分別對案例組與對照組在年齡、用藥劑量與用藥時間的平均值進行獨立樣本 t 檢定。該函數以各變數的觀察值為輸入，回傳 t 統計量與 P 值；虛無假設為「兩組在這些特徵上的分布無統計顯著差異」，藉此評估案例組與對照組在年齡和用藥行為上的平均差異是否具有統計學意義。

3.3.2 U 檢定

在比較案例組與對照組的年齡中位數時，當資料分布可能偏離常態或含有極端值，所以改用 Mann-Whitney U 檢定（又稱 Wilcoxon rank-sum test）來檢驗兩組樣本是否具有相同的中位數。此檢定並不對原始值做分布假設，而是將案例組與對照組的觀測值合併後排序，計算出案例組的秩次總和 R_1 及對照組的秩次總和 R_2 ，並由以下公式(12)、公式(13)得到 U 統計量：

$$U_1 = n_1 n_2 + \frac{n_1(n_1+1)}{2} - R_1 \quad (12)$$

$$U_2 = n_1 n_2 + \frac{n_2(n_2+1)}{2} - R_2 \quad (13)$$

最終以 $U = \min(U_1, U_2)$ 作為檢定統計量。透過 SciPy 的 mannwhitneyu 函式呼叫，直接回傳這個 U 統計量以及對應的雙尾 p 值，無需額外計算 Z 值或其推導公式；若 p 值小於 0.05，便可認定兩組在該連續變數的中位數上具有統計顯著差異。

相同方法也應用於比較各種用藥參數，包括對每種心血管藥物的中位劑量、最大/最小劑量，以及平均用藥時間等指標。將同樣將案例組與對照組的該指標值合併排序後，以 mannwhitneyu 函式取得 U 統計量與 p 值，若 $p < 0.05$ ，則視為該用藥劑量或用藥時間在兩組之間存在顯著的中位差異。

此做法確保對於非正態分布或離群值敏感的用藥資料，也能透過非參數檢定獲得穩健的結果。

3.3.3 KS檢定

在 KS 檢定中，能透過經驗累積分布函數（Empirical Cumulative Distribution Function, ECDF）比較兩組樣本的整體分布形態是否存在顯著差異。此方法以案例組與對照組在每一個可能的取值 x 上，計算各自 ECDF $F_1(x)$ 與 $F_2(x)$ 之間的最大絕對差異，如公式(14)：

$$D = \sup_x |F_1(x) - F_2(x)| \quad (14)$$

當 D 的數值已超出根據樣本大小與顯著水準所對應的關鍵門檻時，即可判定兩組數據在整體分布上已經出現實質差異，不再支持它們源自同一分布的假設。

在實務操作上，可以透過 SciPy 套件提供的 `stats.ks_2samp` 函式，將案例組與對照組的原始觀測值作為輸入，函式會回傳 KS 統計量 D 以及對應的雙尾 p 值；當 p 值小於預設的顯著水準（通常為 0.05）時，即視為兩組分布之間具有顯著差異，否則無足夠證據拒絕虛無假設。

由於 KS 檢定不需對資料分布做任何參數假設，且能同時對位置、形狀及分散程度的差異敏感偵測，因此在檢查年齡、劑量分布、用藥時間等連續變數時，常與 t 檢定、 U 檢定互補，提供更全面的分布差異檢驗，確保分析結果的穩健性。

3.3.4 卡方檢定

在卡方檢定中，將案例組與對照組在二元類別變數（如性別、事件發生與共病狀況）上的觀察頻數填入 2×2 列聯表，並依照檢定統計量，如公式(15)：

$$\chi^2 = \sum_{i,j} \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \quad (15)$$

計算整體偏差，其中第 i 行第 j 列的期望頻數 E_{ij} 透過行總和與列總和的乘積再除以樣本總數求得。當任何一格的期望頻數低於 5 時，為了滿足檢定條件，所以改用 Fisher 精確檢定以確保結果的可靠性。實務操作上，可直接呼叫 SciPy 套件中的 `stats.chi2_contingency` 函式，一次回傳 χ^2 統計量、對應的 p 值、自由度以及期望頻數矩陣；若 p 值小於 0.05，便可判定該類別變數在案例組與對照組間的分布存在統計學上的顯著差異。

此外，針對多於兩種分類的情況，卡方檢定可擴展至 $r \times c$ 的列聯表，適用於檢驗性別分布、事件發生、多重共病或不同藥物使用類別間的分布差異。由於卡

方檢定在大樣本情境下具良好近似能力，且與 Fisher 精確檢定互為補充，這兩種方法合用能全面掌握各類別變數在群組間的顯著差異。

3.3.5 Fisher精確性檢定

當樣本量有限或任何 2×2 列聯表中的期望頻數低於 5 時，Fisher 精確性檢定便成為卡方檢定更為穩健的替代方案。Fisher 精確性檢定並不倚賴大樣本近似，而是依據固定的列與欄總和，透過超幾何分布計算在這些邊際條件下，每一種可能表格配置的精確機率。若以 a 、 b 、 c 、 d 分別代表四格的觀察頻數，總樣本量為 n ，則單一格子在給定邊際總和下之發生機率可表述為公式(16)：

$$p = \frac{(a+b)! (c+d)! (a+c)! (b+d)!}{a! b! c! d! n!} \quad (16)$$

最終的 p 值由所有與觀察值同等或更極端配置的機率總和而來，使得在稀疏資料或不對稱分布時依然能精確控制第一型錯誤。實務上，無論是在 R 語言中呼叫 `stats::fisher.test`，或是透過 SciPy 套件中的 `scipy.stats.fisher_exact` 函式，都能快速獲取對應的 odds ratio 及精確 p 值。由於此檢定方法對小樣本格外敏感，當本研究在性別分布、事件發生、各項共病或使用不同藥物的獨立性檢定中，若任何格子的期望值低於 5，均直接啟用 Fisher 精確性檢定，以確保分析結果在不同樣本規模下的可靠與一致。

3.4 生存分析之參數數值設定

3.4.1 Kaplan-Meier 估計量之參數數值設定

在本研究中，將以天 (days) 為單位計算生存時間 T ，從索引日期起直至中風事件發生或資料右刪失 (censoring) 為止。利用 Python 的 lifelines [35] 套件，依據 with_psychosis 分群，分別擬合案例組與對照組兩組 Kaplan-Meier 存活曲線。圖形輸出時，橫軸標示追蹤時間 (天)，縱軸標示累積存活率 (survival rate)；每次事件發生的時間點即為階躍點 (step point)，同日多名事件則累積跳躍幅度。信賴區間採用 lifelines 預設設定，在事件或刪失時間點顯示對應的 95% CI。

3.4.2 解構式對數秩檢定之參數數值設定

在使用傳統對數秩檢定時，能夠觀察到當兩條生存曲線呈交錯狀 (有時上方、有時下方)，因為在構造初步統計量 \hat{D} 時，是將所有時間點的觀察值與期望值差異直接累加，正負差異會互相抵消；即便最後還要平方消除負號，但在累加過程中的抵銷現象仍會導致整體檢定統計量偏低，如圖 1 所示：

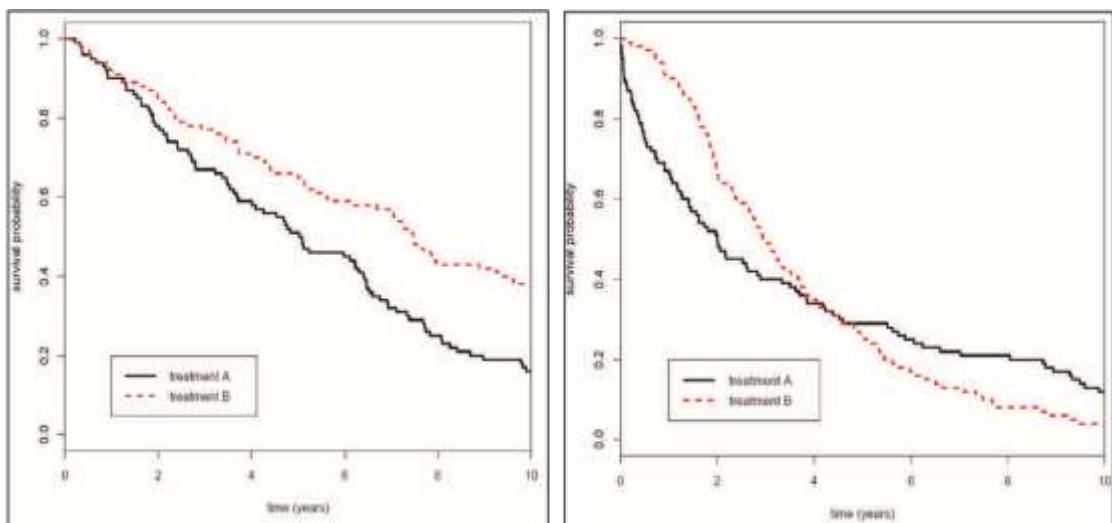


圖 1 生存曲線主導與交錯狀態[36]

最後可能無法反映實際的「總差異量」。為了解決此問題，參考王又增老師¹提出的「解構式對數秩檢定」構想，於每個事件時間點分別進行一次 2×2 卡方檢定，例如在第 t_j 天，只使用第 1 天到第 t_j 天的所有風險集與事件數據，先計算第 t_j 天的累積觀察事件數 O_{kj} 及對應的風險集大小，再以整張 2×2 列聯表呼叫 SciPy 套件中的 `scipy.stats.chi2_contingency` 函式，生成該時間點的卡方統計量與 p 值。如此不僅能取得全時段的整體差異檢定結果，也能清楚顯示每個時間點的顯著性程度。

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具體實作時，先將輸入的「設計矩陣」依屬性中指定的「預測變數欄」（此處為「嚴重型精神病變數」）分成案例組與對照組，並對兩組中已發生事件的子集分別計算累積直方圖(`np.histogram + np.cumsum`)，得到「案例組累積事件數」與「對照組累積事件數」。接著，以上述累積事件數自總樣本數扣除，即可得「案例組風險集」與「對照組風險集」。對於每一列（即每一個 t_j ），將這四個值組成 2×2 列聯表，再以 `chi2_contingency` 函式計算該列的「卡方統計量」與「p 值」；若因樣本過小而拋出例外，則統計量與 p 值皆設為 0，以免中斷迭代。最後，將所有時間點的結果匯整成一張包含「案例組累積事件數」、「對照組累積事件數」、「案例組風險集」、「對照組風險集」、「卡方統計量」及「p 值」六個欄位的資料表，作為後續可視化與顯著性標註的依據。

如此「逐點拆解」的方法，既能避免正負差異在累加時相互抵銷的盲點，也能在 Kaplan-Meier 存活曲線圖上，精確標示每個時間點的顯著性（例如於 $p < 0.05$ 時標記顏色），並將完整的統計細節輸出成表格，方便後續深入分析與測試。

3.4.3 比例風險模型之參數數值設定

本研究中，將使用 `lifelines` 套件的 `CoxPHFitter` 物件對整個設計矩陣一次性擬合，輸入包括所有受試者的生存時間(T)、事件指標(E)、性別(gender)、年齡(age)、共病協變數以及心血管用藥指標，並最終輸出危險比(Hazard Ratio)、95%信賴區間與 P 值等彙總結果。

在資料前處理階段，先一次剔除所有日期時間型欄位；若事件欄位不等於預設的 E 欄位，便再移除 E 欄位，確保擬合只會讀取正確的事件指標與生存時間。接著透過參數字典指定模型設定，將生存時間欄位固定為 T，事件指標根據屬性動態讀取，並將擬合步長設定為 0.25，以提升在大樣本時的收斂穩定性。

在協變數部分，將納入性別(gender)、年齡(age)以及五項與心血管疾病高度關聯的共變因：「是否診斷過高血壓」、「是否診斷過心臟類型疾病」、「是否診斷過神經類型疾病」、「是否診斷過糖尿病」與「是否診斷過高血脂」，同時也計算了這五項共病的發生次數欄位，而以上提到的共變因病歷資料，都取自於索引日期到事件日期之間的病歷資料，以探討在這之間二元與數值型對於風險的影響。

接著，將八大心血管用藥：Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin 同樣依「是否使用該藥物」二元指標（如是否使用 Aspirin）及「使用次數」欄位（如 Aspirin「使用次數」、「劑量平均值」、「劑量最大值」、「劑量最小值」、「劑量中位數」、「用藥時間平均值」、「用藥時間最大值」、「用藥時間最小值」、「用藥時間

中位數」) 納入資料框，而上述所提到的心血管用藥資料，也都取自於索引日期到事件日期之間的心血管用藥資料，以全面捕捉各藥物對事件風險的潛在影響。

最後，使用函式回傳包含「共病二元指標模型」、「共病次數模型」及每種藥物模型的 CoxPHFitter 結果，透過這些模型，得以針對性別、年齡、共病與各種用藥指標(是否使用、使用次數、劑量分布、用藥時間等)的一致參數設定，清晰彙整每項協變數對中風風險的相對影響，並透過產出的 $\exp(\text{coef})$ ：風險比(Hazard Ratio) 及 $\exp(\text{coef}) \text{ lower 95\%}$ & $\exp(\text{coef}) \text{ upper 95\%}$ ：95%信賴區間下限與上限，可在後續一次性呈現所有協變量與藥物指標的風險比估計，為臨床用藥策略與潛在危險因子提供最細緻的實證支援。

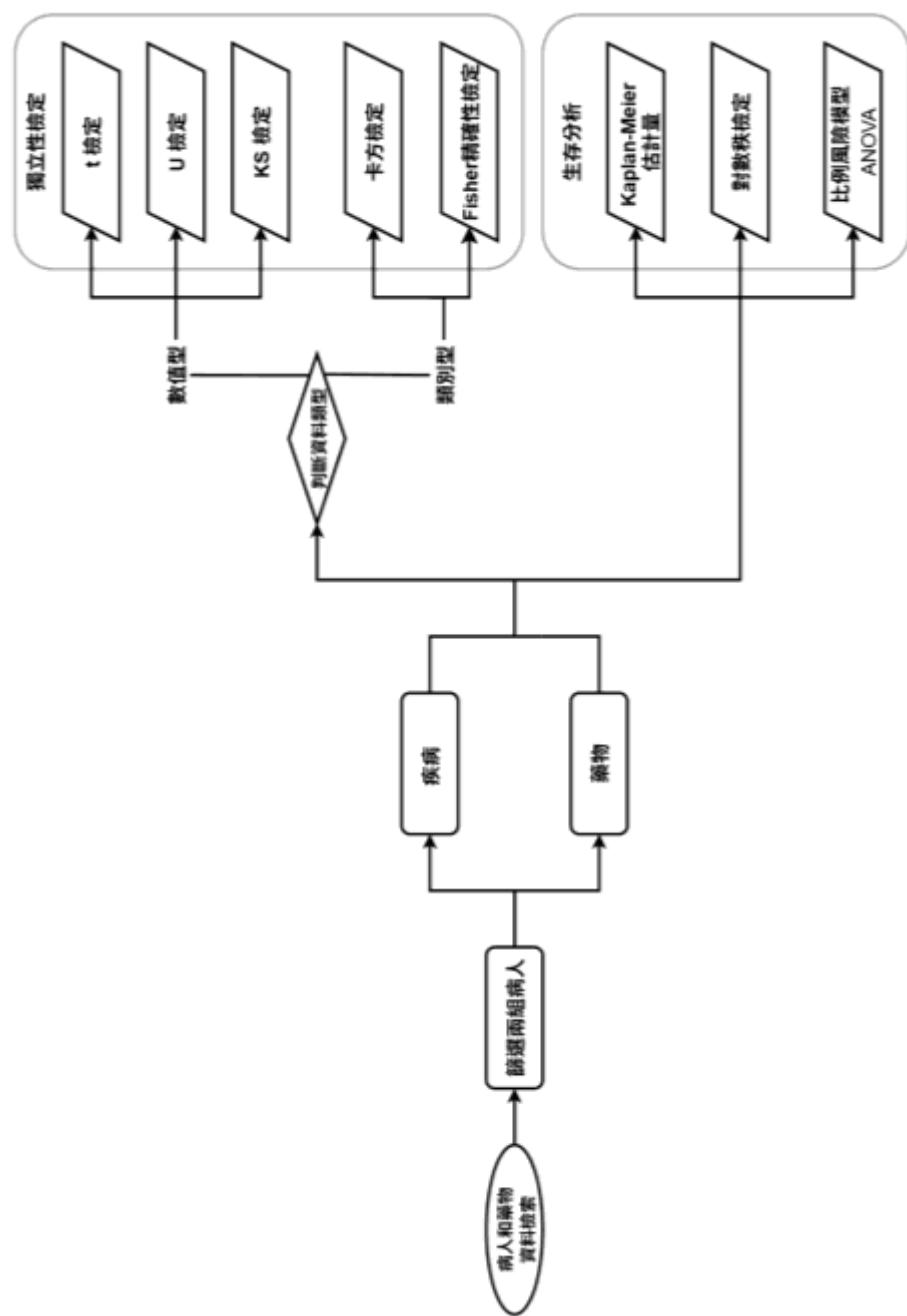
3.4.4 ANOVA之參數數值設定

本研究中，針對二元與數值型共變因分別採用 Type II ANOVA 方法進行分析，以評估共病與基本變項對於缺血性及出血性中風事件發生指標(E)的解釋效果。首先，使用 statsmodels 套件中的 ols 函式建立線性模型；其中，二元共變因包括「是否患有各項共病」；數值型共變因則對應「患有各項共病」項目之發生次數欄位。在模型擬合前，將所有參與 ANOVA 分析的欄位(事件、性別、年齡及各共變因)轉換為對應的型態，確保分析僅針對完整資料進行。

接著，透過 sm.stats.anova_lm 函式執行 Type II ANOVA (typ=2)，並簡化輸出。為了便於後續與 Cox 比例風險模型結果比較，將二元與數值型 ANOVA 結果分別命名為「sum_sq (Sum of Squares)」、「F (F Statistic)」、「PR(>F) (P-value for F)」，其中 sum_sq 的欄位值，表示該協變量對應的模型因子在總變異中所解釋的部分變異量。數值越大，代表該因子在樣本資料中對響應變異(E)的解釋能力越強。則 F 的欄位值為該因素平方和除以其自由度，再與誤差平方和除以誤差自由度的比值，F 值越大，表明該因子與誤差變異的差異越顯著。另外 PR(>F) 的欄位值，表示在零假設(該因子對響應變異無效)下，觀察到等於或更極端 F 值的機率。通常以 0.05 為顯著水準；若 $\text{PR}(>F) < 0.05$ ，則拒絕零假設，表示該協變量對 E 的解釋具有統計顯著性。最後，將 Cox 比例風險模型與 ANOVA 結果以外連接(outer join)方式合併，形成一張同時包含性別、年齡、事件、二元共變因及數值型共變因之完整 ANOVA 結果表，以利在研究方法及結果中，統一呈現各協變量對於事件指標之貢獻與顯著性。

3.5 分析流程整理

依據前述研究方法，本論文之分析流程整理如圖 2 所示：



在資料檢索階段，首先依據嚴重型精神疾病與缺血性/出血性中風的 ICD-9/10 診斷碼，從 MIMIC-IV 2.1 中檢索案例組與對照組樣本，並透過多表關聯確保患者的基本資訊與住院時間完整。為了排除因心血管疾病住院的潛在混雜因素，進一步於對照組中比對每位患者住院期間前三大診斷，凡入院原因為中風相關診斷即予以剔除，使最終篩選結果能準確反映研究主題。

接著在資料處理階段，針對檢索到的原始資料進行缺失值補正與異常值剔除，並依照索引日期與事件日期計算生存時間 T 與事件指標 E，同時自藥物資料表中檢索八大心血管藥物的使用次數、劑量與用藥時間資訊，並轉換為中位數、最小值、最大值、平均值、等衍生變數，最終合併出完整分析檔。

在獨立性檢定階段，以 t 檢定、Mann-Whitney U 檢定與 Kolmogorov-Smirnov 檢定全面檢視案例組與對照組在年齡及用藥參數上的差異，同時運用卡方檢定及 Fisher 精確檢定評估性別、事件發生與各項共病及用藥比例的分布差異，確保基礎資料與潛在協變項間差異的顯著性與穩健性。

對於生存分析參數設定階段，採用 Kaplan-Meier 估計量繪製案例組與對照組在缺血性及出血性中風後的存活曲線，並以解構式對數秩檢定標註每一追蹤時間點的顯著性；最終利用 Cox 比例風險模型，同步納入性別、年齡、五項主要共病及八大心血管藥物的使用指標，估算各協變量對中風事件風險的相對影響，並檢視模型的比例危險假設。

整體分析流程整理自始至終貫穿資料檢索、資料處理、獨立性檢定、生存分析等四大階段，並透過標準化的 SQL 查詢範例與 Python/R 分析方法實現全流程的可重現性，確保研究方法在不同情境下皆具透明度與穩健性。

四、研究結果

4.1 事件為缺血型中風結果

本研究以缺血型中風作為主要事件，將嚴重型精神疾病患者與非精神疾患者進行比較分析，以評估其風險差異。

4.1.1 獨立性檢定

在本小節中，採用多種統計方法檢驗案例組與對照組在患者基本資訊與共病分布上的差異，以便清楚呈現各項檢定結果。

在進行獨立性檢定時，首先針對年齡這一連續變數，同時使用 Student's t 檢定、Mann-Whitney U 檢定與 Kolmogorov-Smirnov (KS) 檢定，評估兩組樣本在平均值、中位數及整體分布上的差異。表 4.1 年齡獨立檢定呈現了年齡詳細統計量與 P 值結果：

表 4.1 年齡獨立檢定

| 年齡 | 案例組 (N=16,787) | 對照組 (N=90,869) | 統計量 | P 值 |
|--------------|----------------------|----------------------|------------------------|----------|
| 平均值 (標準差) | 54.4308 (19.1803) | 55.6828 (19.9127) | $t = -7.5265$ | < 0.0001 |
| | | | $U = 731,755,108.0000$ | < 0.0001 |
| | | | $D = 0.0506$ | < 0.0001 |

從表中可以看到，t 檢定的 t 值為 -7.5265 ($P < 0.0001$) 結果顯示兩組平均年齡之差達到高度顯著，而 Mann-Whitney U 檢定的 U 值為 731,755,108 ($P < 0.0001$)，以及 Kolmogorov-Smirnov (KS) 檢定的 D 值為 0.0506 ($P < 0.0001$)，三種方法均一致指向兩組在年齡分布上存在顯著差異，顯示在後續的多變量生存分析中需考慮以年齡作為重要協變量。

接著，在性別、事件率與各項共病指標上，採用卡方檢定並輔以 Fisher 精確檢定來檢驗二元類別變數的獨立性。下表 4.1 性別、事件、各項共病（高血壓、心臟類型疾病、神經類型疾病、糖尿病、高血脂）獨立檢定在案例組與對照組間，呈現的比較結果：

表 4.1 性別、事件、各項共病獨立檢定

| 分類 | 案例組 (N=16,787) | 對照組 (N=90,869) | 統計量 | P 值 |
|------------|---------------------|----------------------|--------------------------|----------|
| 性別 | 9,991 (女性：59.5%) | 49,404 (女性：54.4%) | $\chi^2 =$ 151.8252 | < 0.0001 |
| | 6,796 (男性：40.5%) | 41,465 (男性：45.6%) | odds ratio = 0.8104 | < 0.0001 |
| 事件 | 469 (2.8%) | 1,719 (1.9%) | $\chi^2 =$ 57.9112 | < 0.0001 |
| | | | odds ratio = 1.4906 | < 0.0001 |
| 高血壓 | 9,571 (57.0%) | 1,719 (1.9%) | $\chi^2 =$ 617.7152 | < 0.0001 |
| | | | odds ratio = 1.5210 | < 0.0001 |
| 心臟類型 疾病 | 6,862 (40.9%) | 30,190 (33.2%) | $\chi^2 =$ 367.6836 | < 0.0001 |
| | | | odds ratio = 1.3896 | < 0.0001 |
| 神經類型 疾病 | 4,957 (29.5%) | 10,225 (11.3%) | $\chi^2 =$ 3,907.1213 | < 0.0001 |
| | | | odds ratio = 3.3048 | < 0.0001 |
| 糖尿病 | 4,372 (26.0%) | 17,270 (19.0%) | $\chi^2 =$ 437.0497 | < 0.0001 |
| | | | odds ratio = 1.5008 | < 0.0001 |
| 高血脂 | 7,111 (42.4%) | 29,952 (33.0%) | $\chi^2 =$ 554.4149 | < 0.0001 |
| | | | odds ratio = 1.4947 | < 0.0001 |

如表所示，性別分布在檢定中達到高度顯著 ($\chi^2 = 151.8252$, $P < 0.0001$; OR = 0.8104, $P < 0.0001$)，顯示案例組中女性比例顯著高於對照組。事件發生率方面 (2.8% vs. 1.9%), $\chi^2 = 57.9112$ ($P < 0.0001$) 及 OR = 1.4906 ($P < 0.0001$) 皆顯示統計顯著差異。高血壓的檢定結果為 $\chi^2 = 617.7152$ ($P < 0.0001$; OR = 1.5210)，案例組高血壓盛行率顯著高於對照組。心臟類型疾病方面 (40.9% vs.

33.2%) 則為 $\chi^2 = 367.6836$ ($P < 0.0001$; $OR = 1.3896$) , 顯示有心臟類型疾病者於案例組的比例亦明顯上升。神經類型疾病差異尤為顯著 (29.5% vs. 11.3 % ; $\chi^2 = 3,907.1213$, $P < 0.0001$; $OR = 3.3048$) , 表明此類共病在案例組中風險更高。糖尿病 (26.0% vs. 19.0% ; $\chi^2 = 437.0497$, $P < 0.0001$; $OR = 1.5008$) 及高血脂 (42.4% vs. 33.0% ; $\chi^2 = 554.4149$, $P < 0.0001$; $OR = 1.4947$) 亦皆達顯著差異。

綜合上述獨立性檢定結果，確認在患者基本資訊及主要共病上，案例組與對照組間均存在顯著差異，為後續生存分析與比例風險模型的協變數選擇提供了實證基礎。

4.1.2 藥物獨立性檢定

在針對缺血性中風事件的分析中，將進一步檢驗案例組與對照組在藥物使用情形上的差異，其中包含藥物使用率、劑量、使用次數與用藥起訖時間等多重指標的獨立性檢定。為了全面掌握這些變數的差異，各項指標將對應到各自的檢定如 Student's t 檢定、Mann-Whitney U 檢定、Kolmogorov-Smirnov 檢定、卡方檢定及 Fisher 精確檢定，以評估兩組樣本在使用率、平均值、標準差及整體分布上的顯著性差異，而關於表中設定的詳細說明，這裡將以下表舉例說明，主要能分成三個區域來看。

第一個區域是分類欄位中的使用率，意思是將案例組與對照組有使用藥物和沒有使用藥物的人（表中欄位顯示的是有使用藥物的人數），使用卡方檢定及 Fisher 精確檢定來觀察當中的統計量與 P 值，以實際舉例來說明，像是使用率這個欄位會依照患者的唯一識別碼 (subject_id) 來查詢，如案例組的患者利用唯一識別碼查詢診斷紀錄後，有 6,292 (37.5%) 人都是有使用 Aspirin 的用藥紀錄，那 Aspirin 藥物的使用率欄位就是 6,292 (37.5%) 人，根據此方法最後即可製成符合 Aspirin 藥物獨立性檢定欄位的資料。

第二個區域是分類欄位中的中位數、使用次數、最大值、平均值、最小值，意思是將案例組與對照組每位使用該藥物的人，針對該藥物的使用劑量（藥物劑量單位為毫克），使用 t 檢定、U 檢定、KS 檢定來觀察當中的統計量與 P 值，以實際舉例來說明，像是使用次數這個欄位會依照患者的唯一識別碼來查詢，如該患者的唯一識別碼查詢診斷紀錄有 9 次紀錄都是使用 Aspirin 的用藥紀錄，那該患者的 Aspirin 藥物使用次數欄位就是 9 次，接著把該患者的 9 次 Aspirin 藥物診斷紀錄中的藥物劑量，也就是單位為毫克的 Aspirin 藥物劑量，使用統計來區分為中位數、最大值、平均值、最小值，根據此方法最後即可製成符合 Aspirin 藥物獨立性檢定欄位的資料。

第三個區域是分類欄位中的起訖時間平均值、起訖時間最大值、起訖時間最小值、起訖時間中位數、起訖時間最小值，意思是將案例組與對照組每位有使用該藥物的人，針對該藥物的使用起訖時間（藥物起訖時間單位為小時），使用 t

檢定、U 檢定、KS 檢定來觀察當中的統計量與 P 值，以實際舉例來說明，依照患者的唯一識別碼來查詢，如該患者的唯一識別碼查詢診斷紀錄有 9 次紀錄都是使用 Aspirin 的用藥紀錄，那該患者每一次使用 Aspirin 藥物的起始時間與結束時間相減後取絕對值，接著把時間單位換算成小時，就能得到該患者 9 次使用 Aspirin 藥物單位為小時的起訖時間診斷，並使用統計來區分為起訖時間平均值、起訖時間最大值、起訖時間最小值、起訖時間中位數、起訖時間最小值，根據此方法最後即可製成符合 Aspirin 藥物獨立性檢定欄位的資料，以下圖 3 到 4 呈現範例查詢結果，另外下表 4.1 用藥獨立檢定，分別呈現八種心血管用藥的各項檢定結果：

| subject_id | drug | dose_val_rx | dose_unit_rx | starttime | stoptime |
|------------|---------|-------------|--------------|---------------------|---------------------|
| 10000980 | Aspirin | 81 | mg | 2193-08-15 08:00:00 | 2193-08-17 19:00:00 |
| 10000980 | Aspirin | 81 | mg | 2190-11-07 12:00:00 | 2190-11-08 20:00:00 |
| 10000980 | Aspirin | 81 | mg | 2190-11-07 08:00:00 | 2190-11-07 11:00:00 |
| 10000980 | Aspirin | 81 | mg | 2191-04-03 22:00:00 | 2191-04-11 20:00:00 |
| 10000980 | Aspirin | 81 | mg | 2191-05-24 08:00:00 | 2191-05-24 21:00:00 |
| 10000980 | Aspirin | 81 | mg | 2189-06-27 11:00:00 | 2189-07-03 19:00:00 |
| 10000980 | Aspirin | 81 | mg | 2188-01-05 10:00:00 | 2188-01-05 22:00:00 |
| 10000980 | Aspirin | 325 | mg | 2188-01-03 10:00:00 | 2188-01-04 10:00:00 |
| 10000980 | Aspirin | 81 | mg | 2191-07-16 18:00:00 | 2191-07-19 17:00:00 |

圖 3 範例 Aspirin 藥物查詢（一）

| subject_id | drug | dose_val_rx | dose_unit_rx | hours_diff |
|------------|---------|-------------|--------------|------------|
| 10000980 | Aspirin | 81 | mg | 59 |
| 10000980 | Aspirin | 81 | mg | 32 |
| 10000980 | Aspirin | 81 | mg | 3 |
| 10000980 | Aspirin | 81 | mg | 190 |
| 10000980 | Aspirin | 81 | mg | 13 |
| 10000980 | Aspirin | 81 | mg | 152 |
| 10000980 | Aspirin | 81 | mg | 12 |
| 10000980 | Aspirin | 325 | mg | 24 |
| 10000980 | Aspirin | 81 | mg | 71 |

圖 4 範例 Aspirin 藥物查詢（二）

表 4.1 每人 Aspirin 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,869) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 5,507 (32.8%) | 24,616 (27.1%) | $\chi^2 = 229.7026$ | < 0.0001 |
| | | | odds ratio = 1.3140 | < 0.0001 |
| 中位數 | 127.4989 (92.0409) | 146.1933 (104.3453) | t = -12.2701 | < 0.0001 |
| | | | U = 61,910,661.5000 | < 0.0001 |
| | | | D = 0.0859 | < 0.0001 |
| 使用次數 | 3.5466 (4.2586) | 2.3626 (2.1638) | t = 29.7224 | < 0.0001 |
| | | | U = 82,123,447.5000 | < 0.0001 |
| | | | D = 0.1681 | < 0.0001 |
| 最大值 | 166.6351 (119.7952) | 178.9381 (121.6145) | t = -6.8050 | < 0.0001 |
| | | | U = 63,913,252.5000 | < 0.0001 |
| | | | D = 0.0611 | < 0.0001 |
| 平均值 | 132.7041 (86.7349) | 150.3983 (99.3887) | t = -12.2121 | < 0.0001 |
| | | | U = 62,577,056.0000 | < 0.0001 |
| | | | D = 0.0851 | < 0.0001 |
| 最小值 | 111.6904 (81.4301) | 130.1932 (98.8888) | t = -12.9383 | < 0.0001 |
| | | | U = 62,492,212.5000 | < 0.0001 |
| | | | D = 0.0798 | < 0.0001 |
| 起訖時間 平均值 | 96.8271 (111.9593) | 65.1993 (65.7459) | t = 27.8027 | < 0.0001 |
| | | | U = 83,961,698.0000 | < 0.0001 |
| | | | D = 0.1982 | < 0.0001 |
| 起訖時間 最大值 | 172.8092 (234.0323) | 97.4331 (106.6167) | t = 36.3964 | < 0.0001 |
| | | | U = 86,473,060.0000 | < 0.0001 |
| | | | D = 0.2274 | < 0.0001 |
| 起訖時間 最小值 | 49.2085 (88.0875) | 42.1642 (61.8763) | t = 7.0077 | < 0.0001 |
| | | | U = 67,971,020.0000 | 0.7435 |
| | | | D = 0.0448 | < 0.0001 |
| 起訖時間 中位數 | 86.5191 (102.3838) | 60.8446 (64.9777) | t = 23.5112 | < 0.0001 |
| | | | U = 81,615,780.5000 | < 0.0001 |
| | | | D = 0.1695 | < 0.0001 |

表 4.1 每人 Warfarin 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立
檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,869) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 1,542 (9.2%) | 7,540 (8.3%) | $\chi^2 = 14.4653$ | 0.0001 |
| | | | odds ratio = 1.1178 | 0.0002 |
| 中位數 | 3.9278 (2.0764) | 3.9796 (1.8039) | t = -1.0006 | 0.3170 |
| | | | U = 5,629,778.0000 | 0.0458 |
| | | | D = 0.0440 | 0.0136 |
| 使用次數 | 12.6213 (20.4933) | 5.2241 (6.6202) | t = 25.5073 | < 0.0001 |
| | | | U = 7,882,814.5000 | < 0.0001 |
| | | | D = 0.2753 | < 0.0001 |
| 最大值 | 5.8437 (3.1640) | 5.1391 (2.2907) | t = 10.2450 | < 0.0001 |
| | | | U = 6,577,207.5000 | < 0.0001 |
| | | | D = 0.1218 | < 0.0001 |
| 平均值 | 3.9409 (1.9346) | 3.9814 (1.7061) | t = -0.8295 | 0.4068 |
| | | | U = 5,644,807.0000 | 0.0715 |
| | | | D = 0.0745 | < 0.0001 |
| 最小值 | 2.2748 (1.6458) | 2.8966 (1.8313) | t = -12.3511 | < 0.0001 |
| | | | U = 4,574,608.5000 | < 0.0001 |
| | | | D = 0.1600 | < 0.0001 |
| 起訖時間 平均值 | 28.6498 (19.3418) | 26.8397 (20.0431) | t = 3.2504 | 0.0012 |
| | | | U = 6,453,817.5000 | < 0.0001 |
| | | | D = 0.1142 | < 0.0001 |
| 起訖時間 最大值 | 67.4650 (64.9264) | 45.8340 (39.1648) | t = 17.3540 | < 0.0001 |
| | | | U = 7,376,557.0000 | < 0.0001 |
| | | | D = 0.1988 | < 0.0001 |
| 起訖時間 最小值 | 9.4358 (15.2882) | 13.4637 (19.6626) | t = -7.5885 | < 0.0001 |
| | | | U = 4,660,248.0000 | < 0.0001 |
| | | | D = 0.1527 | < 0.0001 |
| 起訖時間 中位數 | 25.7575 (17.6162) | 25.7035 (19.6748) | t = 0.0998 | 0.9205 |
| | | | U = 6,030,891.5000 | 0.0195 |
| | | | D = 0.0915 | < 0.0001 |

表 4.1 每人 Clopidogrel 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,869) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 1,254 (7.5%) | 5,799 (6.4%) | $\chi^2 = 27.4145$ | < 0.0001 |
| | | | odds ratio = 1.1843 | < 0.0001 |
| 中位數 | 88.3164 (54.9430) | 94.9791 (69.6337) | t = -3.1809 | 0.0015 |
| | | | U = 3,533,901.5000 | 0.0027 |
| | | | D = 0.0266 | 0.4487 |
| 使用次數 | 3.3349 (3.6012) | 2.0955 (1.8607) | t = 17.5342 | < 0.0001 |
| | | | U = 4,645,175.0000 | < 0.0001 |
| | | | D = 0.2154 | < 0.0001 |
| 最大值 | 130.0239 (127.6385) | 134.8487 (139.1042) | t = -1.1297 | 0.2586 |
| | | | U = 3,625,630.5000 | 0.8173 |
| | | | D = 0.0162 | 0.9444 |
| 平均值 | 95.9527 (57.4709) | 101.7198 (71.0719) | t = -2.6896 | 0.0072 |
| | | | U = 3,605,255.0000 | 0.4942 |
| | | | D = 0.0336 | 0.1906 |
| 最小值 | 78.4390 (35.8075) | 80.1345 (45.8864) | t = -1.2300 | 0.2188 |
| | | | U = 3,620,963.0000 | 0.2953 |
| | | | D = 0.0037 | > 0.9900 |
| 起訖時間 平均值 | 75.5126 (83.3676) | 54.6169 (68.1427) | t = 9.4386 | < 0.0001 |
| | | | U = 4,323,919.5000 | < 0.0001 |
| | | | D = 0.1698 | < 0.0001 |
| 起訖時間 最大值 | 135.4083 (170.8412) | 78.0819 (113.0654) | t = 14.6913 | < 0.0001 |
| | | | U = 4,580,424.5000 | < 0.0001 |
| | | | D = 0.2132 | < 0.0001 |
| 起訖時間 最小值 | 37.2305 (63.8274) | 37.2331 (52.4676) | t = -0.0016 | > 0.9900 |
| | | | U = 3,365,104.0000 | < 0.0001 |
| | | | D = 0.1006 | < 0.0001 |
| 起訖時間 中位數 | 67.3904 (79.7808) | 51.5493 (67.6811) | t = 7.2681 | < 0.0001 |
| | | | U = 4,174,735.0000 | < 0.0001 |
| | | | D = 0.1466 | < 0.0001 |

表 4.1 每人 Apixaban 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立
檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,869) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 865 (5.2%) | 1,746 (1.9%) | $\chi^2 = 625.1909$ | < 0.0001 |
| | | | odds ratio = 2.7731 | < 0.0001 |
| 中位數 | 4.8497 (1.8738) | 5.0294 (2.0714) | t = -2.1515 | 0.0315 |
| | | | U = 731,229.0000 | 0.1286 |
| | | | D = 0.0328 | 0.5476 |
| 使用次數 | 3.1480 (3.2764) | 1.9290 (1.6160) | t = 12.7327 | < 0.0001 |
| | | | U = 963,856.5000 | < 0.0001 |
| | | | D = 0.2138 | < 0.0001 |
| 最大值 | 5.2861 (2.2108) | 5.3021 (2.2596) | t = -0.1714 | 0.8639 |
| | | | U = 755,863.0000 | 0.9627 |
| | | | D = 0.0080 | > 0.9900 |
| 平均值 | 4.8548 (1.8082) | 5.0303 (2.0297) | t = -2.1537 | 0.0314 |
| | | | U = 727,045.5000 | 0.0874 |
| | | | D = 0.0413 | 0.2671 |
| 最小值 | 4.4408 (1.8181) | 4.7659 (2.0303) | t = -3.9844 | < 0.0001 |
| | | | U = 696,716.0000 | 0.0002 |
| | | | D = 0.0564 | 0.0481 |
| 起訖時間 平均值 | 66.2388 (62.7015) | 50.5499 (51.2228) | t = 6.8247 | < 0.0001 |
| | | | U = 910,815.5000 | < 0.0001 |
| | | | D = 0.1715 | < 0.0001 |
| 起訖時間 最大值 | 115.0728 (129.8100) | 70.1850 (74.4328) | t = 11.2033 | < 0.0001 |
| | | | U = 953,635.5000 | < 0.0001 |
| | | | D = 0.2042 | < 0.0001 |
| 起訖時間 最小值 | 33.3549 (48.0396) | 35.9685 (48.9591) | t = -1.2919 | 0.1965 |
| | | | U = 719,418.0000 | 0.0486 |
| | | | D = 0.0632 | 0.0185 |
| 起訖時間 中位數 | 59.8566 (59.3536) | 48.0106 (50.7092) | t = 5.3029 | < 0.0001 |
| | | | U = 881,110.5000 | < 0.0001 |
| | | | D = 0.1460 | < 0.0001 |

表 4.1 每人 Rivaroxaban 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,869) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 473 (2.8%) | 1,147 (1.3%) | $\chi^2 = 231.2825$ | < 0.0001 |
| | | | odds ratio = 2.2680 | < 0.0001 |
| 中位數 | 17.8858 (3.0133) | 17.7779 (2.9494) | t = 0.6655 | 0.5058 |
| | | | U = 278,838.0000 | 0.3106 |
| | | | D = 0.0349 | 0.7931 |
| 使用次數 | 2.8647 (3.1901) | 1.7393 (1.4238) | t = 9.8131 | < 0.0001 |
| | | | U = 349,002.5000 | < 0.0001 |
| | | | D = 0.2403 | < 0.0001 |
| 最大值 | 18.3562 (2.8479) | 18.0471 (2.8944) | t = 1.9638 | 0.0497 |
| | | | U = 288,204.0000 | 0.0159 |
| | | | D = 0.0676 | 0.0890 |
| 平均值 | 17.8453 (2.8400) | 17.7563 (2.8819) | t = 0.5673 | 0.5706 |
| | | | U = 272,163.5000 | 0.9078 |
| | | | D = 0.0615 | 0.1513 |
| 最小值 | 17.1934 (3.2484) | 17.4194 (3.1434) | t = -1.3023 | 0.1930 |
| | | | U = 261,899.5000 | 0.2153 |
| | | | D = 0.0266 | 0.9659 |
| 起訖時間 平均值 | 66.1971 (70.8681) | 39.2530 (44.3934) | t = 9.2185 | < 0.0001 |
| | | | U = 358,827.5000 | < 0.0001 |
| | | | D = 0.2762 | < 0.0001 |
| 起訖時間 最大值 | 108.1966 (126.2901) | 53.5510 (74.3070) | t = 10.8065 | < 0.0001 |
| | | | U = 372,296.5000 | < 0.0001 |
| | | | D = 0.2956 | < 0.0001 |
| 起訖時間 最小值 | 38.0486 (62.2191) | 28.0410 (38.6420) | t = 3.9163 | < 0.0001 |
| | | | U = 290,739.5000 | 0.0228 |
| | | | D = 0.0993 | 0.0025 |
| 起訖時間 中位數 | 60.5973 (69.2531) | 37.5863 (43.7822) | t = 8.0203 | < 0.0001 |
| | | | U = 348,226.5000 | < 0.0001 |
| | | | D = 0.2266 | < 0.0001 |

表 4.1 每人 Dabigatran etexilate 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,869) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 81 (0.5%) | 368 (0.4%) | $\chi^2 = 2.0511$ | 0.1521 |
| | | | odds ratio = 1.1924 | 0.1517 |
| 中位數 | 140.7407 (24.1073) | 140.0000 (24.7687) | t = 0.2448 | 0.8067 |
| | | | U = 15,068.0000 | 0.8001 |
| | | | D = 0.0139 | > 0.9900 |
| 使用次數 | 2.7901 (2.7464) | 1.8859 (1.3823) | t = 4.3126 | < 0.0001 |
| | | | U = 18,270.5000 | 0.0005 |
| | | | D = 0.1716 | 0.0348 |
| 最大值 | 143.5185 (21.2050) | 141.6304 (23.4853) | t = 0.6661 | 0.5057 |
| | | | U = 15,310.0000 | 0.4777 |
| | | | D = 0.0277 | > 0.9900 |
| 平均值 | 141.1616 (22.6520) | 139.5521 (24.3263) | t = 0.5456 | 0.5856 |
| | | | U = 15,292.5000 | 0.5737 |
| | | | D = 0.0354 | > 0.9900 |
| 最小值 | 138.8889 (26.8095) | 137.1467 (28.1662) | t = 0.5083 | 0.6115 |
| | | | U = 15,276.0000 | 0.5887 |
| | | | D = 0.0258 | > 0.9900 |
| 起訖時間 平均值 | 58.2259 (48.4849) | 39.8799 (36.5874) | t = 3.8344 | 0.0001 |
| | | | U = 18,963.5000 | 0.0001 |
| | | | D = 0.2465 | 0.0005 |
| 起訖時間 最大值 | 92.6173 (78.4963) | 55.2935 (56.5873) | t = 4.9782 | < 0.0001 |
| | | | U = 19,883.5000 | < 0.0001 |
| | | | D = 0.2463 | 0.0005 |
| 起訖時間 最小值 | 35.6543 (47.6543) | 28.2745 (35.2309) | t = 1.5926 | 0.1120 |
| | | | U = 15,704.5000 | 0.4487 |
| | | | D = 0.1087 | 0.3810 |
| 起訖時間 中位數 | 52.6235 (48.3525) | 37.7649 (36.2200) | t = 3.1306 | 0.0019 |
| | | | U = 18,000.5000 | 0.0034 |
| | | | D = 0.1822 | 0.0209 |

表 4.1 每人 Cilostazol 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立
檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,869) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 73 (0.4%) | 116 (0.1%) | $\chi^2 = 76.3034$ | < 0.0001 |
| | | | odds ratio = 3.4170 | < 0.0001 |
| 中位數 | 85.2740 (23.1374) | 88.1466 (21.4834) | t = -0.8687 | 0.3861 |
| | | | U = 3,981.5000 | 0.3762 |
| | | | D = 0.0737 | 0.9479 |
| 使用次數 | 3.0959 (4.6133) | 1.9397 (1.6955) | t = 2.4521 | 0.0151 |
| | | | U = 4,942.5000 | 0.0369 |
| | | | D = 0.1408 | 0.3008 |
| 最大值 | 86.9863 (23.6106) | 90.7328 (19.9265) | t = -1.1707 | 0.2432 |
| | | | U = 3,898.0000 | 0.2039 |
| | | | D = 0.0929 | 0.7903 |
| 平均值 | 85.4504 (22.7669) | 88.3850 (20.6955) | t = -0.9129 | 0.3625 |
| | | | U = 3,950.0000 | 0.3309 |
| | | | D = 0.0929 | 0.7903 |
| 最小值 | 83.5616 (23.6508) | 86.8534 (22.4725) | t = -0.9608 | 0.3379 |
| | | | U = 3,949.0000 | 0.3212 |
| | | | D = 0.0701 | 0.9648 |
| 起訖時間 平均值 | 99.7072 (113.7005) | 72.3455 (58.7168) | t = 2.1739 | 0.0310 |
| | | | U = 4,889.5000 | 0.0736 |
| | | | D = 0.1788 | 0.0981 |
| 起訖時間 最大值 | 158.8219 (205.8570) | 98.6638 (85.4134) | t = 2.7919 | 0.0058 |
| | | | U = 4,931.0000 | 0.0571 |
| | | | D = 0.1621 | 0.1653 |
| 起訖時間 最小值 | 65.0822 (109.3609) | 51.6897 (55.7888) | t = 1.1103 | 0.2683 |
| | | | U = 4,491.0000 | 0.4833 |
| | | | D = 0.0997 | 0.7168 |
| 起訖時間 中位數 | 93.0411 (108.9363) | 69.5474 (59.4862) | t = 1.9147 | 0.0571 |
| | | | U = 4,964.5000 | 0.0462 |
| | | | D = 0.2117 | 0.0299 |

表 4.1 每人 Enoxaparin 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,869) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 2,916 (17.4%) | 10,042 (11.1%) | $\chi^2 = 534.4600$ | < 0.0001 |
| | | | odds ratio = 1.6921 | < 0.0001 |
| 中位數 | 54.5991 (25.3508) | 52.1012 (24.1971) | t = 4.8544 | < 0.0001 |
| | | | U = 15,651,829.0000 | < 0.0001 |
| | | | D = 0.0537 | < 0.0001 |
| 使用次數 | 2.5223 (2.9144) | 1.7733 (1.6473) | t = 17.7724 | < 0.0001 |
| | | | U = 17,327,058.0000 | < 0.0001 |
| | | | D = 0.1504 | < 0.0001 |
| 最大值 | 58.2133 (28.3148) | 54.2539 (25.9917) | t = 7.0940 | < 0.0001 |
| | | | U = 15,880,027.0000 | < 0.0001 |
| | | | D = 0.0654 | < 0.0001 |
| 平均值 | 54.4076 (24.7364) | 52.0425 (23.8384) | t = 4.6762 | < 0.0001 |
| | | | U = 15,596,354.0000 | < 0.0001 |
| | | | D = 0.0648 | < 0.0001 |
| 最小值 | 50.2929 (24.0047) | 49.7242 (23.3573) | t = 1.1502 | 0.2501 |
| | | | U = 14,821,490.0000 | 0.2728 |
| | | | D = 0.0110 | 0.9438 |
| 起訖時間 平均值 | 71.2425 (73.6164) | 56.1983 (51.5079) | t = 12.4960 | < 0.0001 |
| | | | U = 16,437,802.5000 | < 0.0001 |
| | | | D = 0.0881 | < 0.0001 |
| 起訖時間 最大值 | 112.3354 (257.0982) | 71.7462 (75.2904) | t = 13.9014 | < 0.0001 |
| | | | U = 17,444,103.0000 | < 0.0001 |
| | | | D = 0.1652 | < 0.0001 |
| 起訖時間 最小值 | 46.9122 (67.9764) | 44.4869 (51.2121) | t = 2.0801 | 0.0375 |
| | | | U = 13,863,400.0000 | < 0.0001 |
| | | | D = 0.0676 | < 0.0001 |
| 起訖時間 中位數 | 66.3265 (70.2718) | 54.5996 (51.1828) | t = 9.9463 | < 0.0001 |
| | | | U = 15,866,820.0000 | < 0.0001 |
| | | | D = 0.0684 | < 0.0001 |

在 Aspirin 使用情形中，案例組有 5,507 人（32.8%）使用，對照組有 24,616 人（27.1%）使用，使用率差異顯著 ($\chi^2 = 229.7026$, $P < 0.0001$; odds ratio = 1.3140, $P < 0.0001$)。藥物劑量中位數案例組 127.4989 (92.0409) 低於對照組 146.1933 (104.3453)，t 檢定、U 檢定與 KS 檢定均顯示差異顯著 ($P < 0.0001$)。案例組使用次數平均 3.5466 次(4.2586)，高於對照組 2.3626 次(2.1638; $P < 0.0001$)，最大劑量平均 166.6351 (119.7952) 顯著低於對照組 178.9381 (121.6145 ; $P < 0.0001$)。另外，平均劑量 132.7041 (86.7349) 對比 150.3983 (99.3887)，最小劑量 111.6904 (81.4301) 對比 130.1932 (98.8888)，以及起訖時間平均 96.8271 h 對比 65.1993 h、最大 172.8092 h 對比 97.4331 h、最小 49.2085 h 對比 42.1642 h、起訖時間中位數 86.5191 h 對比 60.8446 h，均達顯著 ($P < 0.0001$)，顯示案例組用藥時間分布更為離散。

Warfarin 使用率案例組 1,542 人（9.2%）、對照組 7,540 人（8.3%），差異顯著 ($\chi^2 = 14.4653$, $P = 0.0001$; odds ratio = 1.1178, $P = 0.0002$)。中位劑量案例組 3.9278 (2.0764) 與對照組 3.9796 (1.8039) 差異不顯著 ($t = -1.0006$, $P = 0.3170$)，平均劑量 3.9409 (1.9346) 對比 3.9814 (1.7061) 亦未達顯著 ($P = 0.4068$)。使用次數案例組 12.6213 次(20.4933) 高於對照組 5.2241 次(6.6202; $P < 0.0001$)，最大劑量 5.8437 (3.1640) 顯著高於對照組 5.1391 (2.2907 ; $P < 0.0001$)，起訖時間平均 28.6498 h 對比 26.8397 h、最大 67.4650 h 對比 45.8340 h，亦呈現顯著差異 ($P < 0.01$)。

Clopidogrel 使用率案例組 1,254 人（7.5%）高於對照組 5,799 人（6.4%）($\chi^2 = 27.4145$, $P < 0.0001$; odds ratio = 1.1843, $P < 0.0001$)。中位劑量案例組 88.3164 (54.9430) 略低於對照組 94.9791 (69.6337 ; $t = -3.1809$, $P = 0.0015$)，使用次數案例組 3.3349 次(3.6012) 明顯高於對照組 2.0955 次(1.8607; $P < 0.0001$)。起訖時間平均 75.5126 h 對比 54.6169 h，最大 135.4083 h 對比 78.0819 h，起訖時間中位數 67.3904 h 對比 51.5493 h 均呈顯著差異 ($P < 0.0001$)。

Apixaban 使用率案例組 865 人（5.2%）、對照組 1,746 人（1.9%），差異顯著 ($\chi^2 = 625.1909$, $P < 0.0001$; odds ratio = 2.7731, $P < 0.0001$)。中位劑量案例組 4.8497 (1.8738) 與對照組 5.0294 (2.0714) 差異不顯著 ($P = 0.0315$)。使用次數案例組 3.1480 次 (3.2764) 高於對照組 1.9290 次 (1.6160 ; $P < 0.0001$)，起訖時間平均 66.2388 h 對比 50.5499 h，最大 115.0728 h 對比 70.1850 h，起訖時間中位數 59.8566 h 對比 48.0106 h 皆顯著 ($P < 0.0001$)。

Rivaroxaban 使用率案例組 473 人（2.8%）、對照組 1,147 人（1.3%），差異顯著 ($\chi^2 = 231.2825$, $P < 0.0001$; odds ratio = 2.2680, $P < 0.0001$)。中位劑量案例組 17.8858 (3.0133) 與對照組 17.7779 (2.9494) 無顯著差異 ($P = 0.5058$)，使用次數案例組 2.8647 次(3.1901) 高於對照組 1.7393 次(1.4238; $P < 0.0001$)，起訖時間平均 66.1971 h 對比 39.2530 h，最大 108.1966 h 對比 53.5510 h，起訖時間中位數 60.5973 h 對比 37.5863 h 顯著 ($P < 0.0001$)。

Dabigatran etexilate 使用率案例組 81 人 (0.5%)、對照組 368 人 (0.4%)，差異不顯著 ($\chi^2 = 2.0511$, $P = 0.1521$)。中位劑量 140.7407 (24.1073) 與對照組 140.0000 (24.7687) 無顯著差異，使用次數案例組 2.7901 次 (2.7464) 高於對照組 1.8859 次 (1.3823; $P < 0.0001$)，起訖時間平均 58.2259 h 對比 39.8799 h、最大 92.6173 h 對比 55.2935 h，起訖時間中位數 52.6235 h 對比 37.7649 h 亦顯著 ($P < 0.01$)。

Cilostazol 使用率案例組 73 人 (0.4%) 顯著高於對照組 116 人 (0.1%) ($\chi^2 = 76.3034$, $P < 0.0001$; odds ratio = 3.4170, $P < 0.0001$)。使用次數案例組 3.0959 次 (4.6133) 高於對照組 1.9397 次 (1.6955; $P = 0.0151$)，起訖時間平均值與中位數差異不顯著，起訖時間最大值案例組 158.8219 h 對比對照組 98.6638 h 達顯著 ($P = 0.0058$)。

Enoxaparin 使用率案例組 2,916 人 (17.4%) 高於對照組 10,042 人 (11.1%) ($\chi^2 = 534.4600$, $P < 0.0001$; odds ratio = 1.6921, $P < 0.0001$)。中位劑量 54.5991 (25.3508) 對比 52.1012 (24.1971)，使用次數案例組 2.5223 次 (2.9144) 高於對照組 1.7733 次 (1.6473; $P < 0.0001$)，最大劑量 58.2133 (28.3148) 高於 54.2539 (25.9917)，起訖時間平均 71.2425 h 對比 56.1983 h，最大 112.3354 h 對比 71.7462 h，中位數 66.3265 h 對比 54.5996 h 皆達顯著 ($P < 0.0001$)。

綜合上述，所有心血管藥物在案例組較對照組均呈現較高使用率及用藥次數，多數用藥時間指標顯示更大離散度與延長趨勢，統計檢定均達顯著，顯示嚴重型精神疾病患者在缺血性中風預防與管理中，心血管藥物使用存在顯著差異。

4.1.3 生存分析結果

在生存分析結果中，採用 Kaplan-Meier 估計案例組與對照組之存活函數，將兩組存活曲線並置比較。其中 Kaplan-Meier 圖設定的藍色階梯線代表案例組 (case)，橙色階梯線代表對照組 (control)，則 95% 信賴區間以陰影區域標示，以天數為橫軸、累積存活率為縱軸，接著是解構對數秩檢定圖的設定，圖中是以針對每個時間點，分別計算卡方統計量與 P 值，以揭示兩組之間在不同時間段的顯著性差異，以天數為橫軸、卡方值為縱軸，如下圖 5 所示：

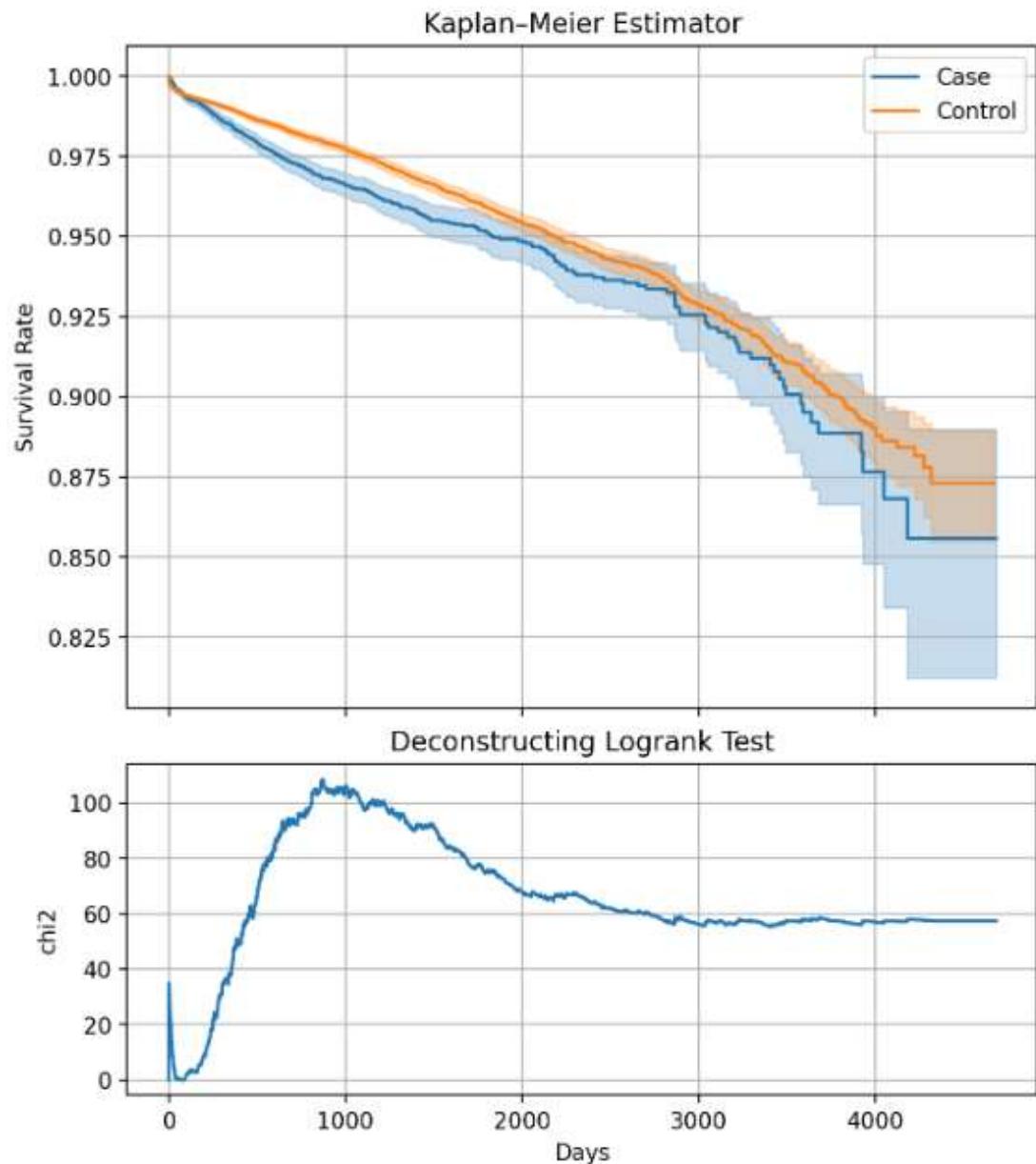


圖 5 案例組與對照組 Kaplan-Meier 存活曲線和解構對數秩檢定生存函數

從圖 5 上圖能發現對照組的生存率在初期略低於案例組，但是來到大約 1000 天的時候，圖 5 的下圖中能發現卡方值正在開始往下降，這是因為案例組的生存率與卡方值的累計降了下來，所以案例組與對照組的生存曲線開始逐漸接近，接著大概到了 1500 天之後，案例組的累計變得更慢了，則對照組幾乎是一直維持固定斜率，此時的卡方值則繼續往下降，直到大概 2000 天之後，案例組下降的更緩慢並與對照組逐漸接近，但計算卡方值的部分還是持續累計，這時的卡方值也緩慢下降，不過這些卡方值都有超過統計顯著。綜合上述來看，對照組累積數率沒有太大的變化，但案例組累計則是逐漸變得緩慢，這表示案例組的危機事件都

比較快發生，所以當累計開始變慢的時候，卡方值則開始往下降，這是因為對照組都沒有太大的變化所造成的結果。

接著，可以透過 Cox 比例風險模型所產生的危險比(Hazard Ratio)與 ANOVA 分析，深入探討二元與數值型共變因對缺血性中風事件發生風險的影響，並將 Cox 比例風險模型與 ANOVA 所產生的結果，以下圖 6 呈現：

| covariate | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq_bool | F_bool | PR(>F)_bool |
|--------------------------------|-----------|---------------------|---------------------|----------|-------------|------------|-------------|
| gender | 1.045729 | 0.959761 | 1.139398 | 0.306971 | 0.318130 | 16.442858 | < 0.0001 |
| age | 1.040404 | 1.036969 | 1.043850 | < 0.0001 | 1.380086 | 71.331093 | < 0.0001 |
| with_psychosis | 0.948184 | 0.851424 | 1.055941 | 0.332632 | 0.035912 | 1.856138 | 0.173074 |
| with_hypertension | 1.289353 | 1.129404 | 1.471953 | 0.000169 | 0.568305 | 29.373379 | < 0.0001 |
| with_heart_type_disease | 1.559728 | 1.405277 | 1.731154 | < 0.0001 | 4.028092 | 208.195897 | < 0.0001 |
| with_neurological_type_disease | 3.045435 | 2.785185 | 3.330002 | < 0.0001 | 17.739515 | 916.884277 | < 0.0001 |
| with_diabetes | 1.166303 | 1.065273 | 1.276915 | 0.000876 | 0.647471 | 33.465183 | < 0.0001 |
| with_hyperlipidemia | 1.486098 | 1.338196 | 1.650346 | < 0.0001 | 4.672954 | 241.526219 | < 0.0001 |

| covariate | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq_time | F_time | PR(>F)_time |
|---------------------------------|-----------|---------------------|---------------------|----------|-------------|------------|-------------|
| gender | 1.153901 | 1.059827 | 1.256325 | 0.000970 | 0.060439 | 3.090416 | 0.078757 |
| age | 1.055554 | 1.052509 | 1.058607 | < 0.0001 | 12.128454 | 620.160526 | < 0.0001 |
| with_psychosis | 1.406808 | 1.264720 | 1.564859 | < 0.0001 | 0.105056 | 5.371801 | 0.020467 |
| hypertension_times | 0.950903 | 0.933904 | 0.968212 | < 0.0001 | 0.359578 | 18.386217 | < 0.0001 |
| heart_type_disease_times | 1.009033 | 1.003273 | 1.014826 | 0.002081 | 2.139108 | 109.378332 | < 0.0001 |
| neurological_type_disease_times | 1.039044 | 1.028017 | 1.050190 | < 0.0001 | 1.308043 | 66.883780 | < 0.0001 |
| diabetes_times | 1.009521 | 1.000403 | 1.018723 | 0.040653 | 0.266781 | 13.641229 | 0.000221 |
| hyperlipidemia_times | 1.009770 | 0.988341 | 1.031664 | 0.374351 | 1.383774 | 70.756068 | < 0.0001 |

圖 6 二元與數值型共變因的風險比網頁結果

在二元共變因模型中，年齡每增加一歲，風險顯著提升 ($HR = 1.0404$ ，95% CI : $1.0370 \sim 1.0439$ ， $p < 0.0001$)，性別影響不顯著 ($HR = 1.0457$ ，95% CI : $0.9598 \sim 1.1394$ ， $p = 0.3181$)。患有嚴重型精神疾病 (with_psychosis) 者風險亦無顯著差異 ($HR = 0.9482$ ，95% CI : $0.8514 \sim 1.0559$ ， $p = 0.3326$)，但高血壓 ($HR = 1.2894$ ，95% CI : $1.1294 \sim 1.4720$ ， $p = 0.0002$)、心臟類型疾病 ($HR = 1.5597$ ，95% CI : $1.4053 \sim 1.7312$ ， $p < 0.0001$) 及神經類型疾病 ($HR = 3.0454$ ，95% CI : $2.7852 \sim 3.3300$ ， $p < 0.0001$) 均顯著增加風險；糖尿病 ($HR = 1.1663$ ，95% CI : $1.0653 \sim 1.2769$ ， $p = 0.0009$) 與高血脂 ($HR = 1.4861$ ，95% CI : $1.3382 \sim 1.6503$ ， $p < 0.0001$) 也同樣顯著。

ANOVA 結果顯示，高血壓 ($\text{sum_sq} = 0.5683$ ， $F = 29.3734$ ， $p < 0.0001$)、心臟類型疾病 ($\text{sum_sq} = 4.0281$ ， $F = 208.1959$ ， $p < 0.0001$)、神經類型疾病 ($\text{sum_sq} = 17.7395$ ， $F = 916.8843$ ， $p < 0.0001$)、糖尿病 ($\text{sum_sq} = 0.6475$ ， $F = 33.4652$ ，

$p < 0.0001$ ）及高血脂（ $\text{sum_sq} = 4.6730$, $F = 241.5262$, $p < 0.0001$ ）對模型具有顯著貢獻。

在數值型共變因模型中，年齡效應更加明顯（ $\text{HR} = 1.0556$, 95% CI : 1.0525 ~ 1.0586, $p < 0.0001$ ），且女性較男性風險顯著上升（ $\text{HR} = 1.1539$, 95% CI : 1.0598 ~ 1.2563, $p = 0.0010$ ）。嚴重型精神疾病次數顯著提升風險（ $\text{HR} = 1.4068$, 95% CI : 1.2647 ~ 1.5649, $p < 0.0001$ ），而高血壓次數則有輕微保護趨勢（ $\text{HR} = 0.9509$, 95% CI : 0.9339 ~ 0.9682, $p < 0.0001$ ）。心臟類型疾病次數（ $\text{HR} = 1.0090$, 95% CI : 1.0033 ~ 1.0148, $p = 0.0021$ ）與神經類型疾病次數（ $\text{HR} = 1.0390$, 95% CI : 1.0280 ~ 1.0502, $p < 0.0001$ ）均顯著累積風險；糖尿病次數微幅增加風險（ $\text{HR} = 1.0095$, 95% CI : 1.0004 ~ 1.0187, $p = 0.0407$ ），而高血脂次數影響不顯著（ $\text{HR} = 1.0098$, 95% CI : 0.9883 ~ 1.0317, $p = 0.3744$ ）。

ANOVA 分析中，年齡（ $\text{sum_sq} = 12.1285$, $F = 620.1605$, $p < 0.0001$ ）、心臟類型疾病次數（ $\text{sum_sq} = 2.1391$, $F = 109.3783$, $p < 0.0001$ ）、神經類型疾病次數（ $\text{sum_sq} = 1.3080$, $F = 66.8838$, $p < 0.0001$ ）均對模型有顯著影響；女性性別及嚴重型精神疾病次數亦具有一定貢獻（ p 分別為 0.0788 與 0.0205），而高血壓次數（ $p = 0.00002$ ）顯示與風險有負相關。

綜合上述來說，二元模型強調共病存在與否對預後的影響，數值模型則進一步揭示部分共病累積次數（嚴重型精神疾病、心臟及神經類型疾病）對存活風險具有持續加成效應，表示臨床在管理缺血性中風患者時，除了評估共病有無，更應關注其嚴重程度與累積負擔。

4.1.4 藥物的比例風險模型與ANOVA

在「藥物的比例風險模型」分析中，先以「二元型共變因藥物預測缺血性中風的風險比（Hazard Ratio, HR；95% Confidence Interval, 95% CI）」為核心，探討缺血性中風患者在使用各類心血管用藥（作為共變因）後，嚴重型精神疾病（作為變因）之相對風險變化。隨後，依次檢視「使用次數」、「劑量與數值型指標（平均值、最大值、最小值、中位數）」以及「用藥起訖時間（平均值、最大值、最小值、中位數）」等 Cox 模型與 ANOVA 結果，全面呈現八種藥物（Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin）對缺血性中風患者的風險影響，關於各項藥物預測缺血性中風的風險比與 ANOVA 詳細結果，請查閱附錄二，以下表 4.1（使用率、使用次數、（劑量平均值、最大值、最小值、中位數）、（用藥起訖時間平均值、最大值、最小值、中位數））呈現，二元型和數值型共變因藥物對預測缺血性中風風險的影響結果（HR (95% CI) 欄位是正相關以字形正體表示、反相關以字形粗體表示、無相關以字形斜體表示）：

表 4.1 二元型共變因藥物對預測缺血性中風風險的影響（使用率）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 0.949464 (0.852550 ~ 1.057394) 無相關 | 0.033980 / 1.756468 / 0.185068 |
| Warfarin | 0.943279 (0.847034 ~ 1.050461) 無相關 | 0.036587 / 1.891071 / 0.169084 |
| Clopidogrel | 0.949195 (0.852312 ~ 1.057090) 無相關 | 0.033142 / 1.713995 / 0.190471 |
| Apixaban | 0.970037 (0.871012 ~ 1.080321) 無相關 | 0.014757 / 0.763124 / 0.382355 |
| Rivaroxaban | 0.953917 (0.856563 ~ 1.062336) 無相關 | 0.029839 / 1.542375 / 0.214267 |
| Dabigatran etexilate | 0.947614 (0.850905 ~ 1.055313) 無相關 | 0.035847 / 1.852777 / 0.173463 |
| Cilostazol | 0.948187 (0.851414 ~ 1.055960) 無相關 | 0.038766 / 2.003788 / 0.156910 |
| Enoxaparin | 0.980272 (0.880164 ~ 1.091766) 無相關 | 0.017954 / 0.928299 / 0.335307 |

表 4.1 數值型共變因藥物對預測缺血性中風風險的影響（使用次數）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.411042 (1.268700 ~ 1.569353) 正相關 | 0.095775 / 4.900435 / 0.026852 |
| Warfarin | 1.406650 (1.264552 ~ 1.564716) 正相關 | 0.110526 / 5.652837 / 0.017429 |
| Clopidogrel | 1.403105 (1.261054 ~ 1.561158) 正相關 | 0.104848 / 5.361089 / 0.020593 |
| Apixaban | 1.440700 (1.295200 ~ 1.602544) 正相關 | 0.159039 / 8.138192 / 0.004335 |
| Rivaroxaban | 1.409505 (1.267117 ~ 1.567894) 正相關 | 0.113208 / 5.788952 / 0.016129 |
| Dabigatran etexilate | 1.406808 (1.264716 ~ 1.564865) 正相關 | 0.105036 / 5.370729 / 0.020479 |
| Cilostazol | 1.405339 (1.263340 ~ 1.563299) 正相關 | 0.101844 / 5.208228 / 0.022482 |
| Enoxaparin | 1.420525 (1.276826 ~ 1.580397) 正相關 | 0.141088 / 7.217378 / 0.007221 |

表 4.1 數值型共變因藥物對預測缺血性中風風險的影響（平均值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.413246 (1.270405 ~ 1.572147) 正相關 | 0.113395 / 5.800762 / 0.016021 |
| Warfarin | 1.404133 (1.262252 ~ 1.561961) 正相關 | 0.104733 / 5.355227 / 0.020662 |
| Clopidogrel | 1.413470 (1.270654 ~ 1.572338) 正相關 | 0.113157 / 5.788178 / 0.016136 |
| Apixaban | 1.433048 (1.288277 ~ 1.594087) 正相關 | 0.138069 / 7.062419 / 0.007873 |
| Rivaroxaban | 1.411345 (1.268771 ~ 1.569941) 正相關 | 0.113491 / 5.803424 / 0.015997 |
| Dabigatran etexilate | 1.406696 (1.264617 ~ 1.564737) 正相關 | 0.105198 / 5.379056 / 0.020382 |
| Cilostazol | 1.406038 (1.264008 ~ 1.564027) 正相關 | 0.102456 / 5.238958 / 0.022088 |
| Enoxaparin | 1.422034 (1.278307 ~ 1.581920) 正相關 | 0.128017 / 6.547656 / 0.010504 |

表 4.1 數值型共變因藥物對預測缺血性中風風險的影響（最大值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.409209 (1.266817 ~ 1.567606) 正相關 | 0.112921 / 5.775323 / 0.016254 |
| Warfarin | 1.404232 (1.262362 ~ 1.562047) 正相關 | 0.104382 / 5.337325 / 0.020875 |
| Clopidogrel | 1.409196 (1.266835 ~ 1.567554) 正相關 | 0.109649 / 5.607320 / 0.017887 |
| Apixaban | 1.433870 (1.289026 ~ 1.594990) 正相關 | 0.140183 / 7.170748 / 0.007411 |
| Rivaroxaban | 1.411525 (1.268935 ~ 1.570138) 正相關 | 0.113967 / 5.827751 / 0.015777 |
| Dabigatran etexilate | 1.406663 (1.264589 ~ 1.564700) 正相關 | 0.105184 / 5.378331 / 0.020390 |
| Cilostazol | 1.406069 (1.264037 ~ 1.564060) 正相關 | 0.102521 / 5.242268 / 0.022046 |
| Enoxaparin | 1.420565 (1.276973 ~ 1.580305) 正相關 | 0.128483 / 6.571515 / 0.010364 |

表 4.1 數值型共變因藥物對預測缺血性中風風險的影響（最小值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.412761 (1.269956 ~ 1.571624) 正相關 | 0.111081 / 5.682593 / 0.017136 |
| Warfarin | 1.406756 (1.264592 ~ 1.564903) 正相關 | 0.107481 / 5.495826 / 0.019064 |
| Clopidogrel | 1.415151 (1.272152 ~ 1.574225) 正相關 | 0.113330 / 5.797639 / 0.016049 |
| Apixaban | 1.430860 (1.286303 ~ 1.591663) 正相關 | 0.134633 / 6.886385 / 0.008687 |
| Rivaroxaban | 1.411027 (1.268483 ~ 1.569590) 正相關 | 0.112779 / 5.766974 / 0.016332 |
| Dabigatran etexilate | 1.406721 (1.264640 ~ 1.564765) 正相關 | 0.105195 / 5.378863 / 0.020384 |
| Cilostazol | 1.406004 (1.263979 ~ 1.563987) 正相關 | 0.102476 / 5.239960 / 0.022076 |
| Enoxaparin | 1.423646 (1.279776 ~ 1.583690) 正相關 | 0.125996 / 6.444174 / 0.011133 |

表 4.1 數值型共變因藥物對預測缺血性中風風險的影響（中位數）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.414280 (1.271332 ~ 1.573301) 正相關 | 0.113269 / 5.794631 / 0.016077 |
| Warfarin | 1.403600 (1.261755 ~ 1.561391) 正相關 | 0.104687 / 5.352878 / 0.020690 |
| Clopidogrel | 1.415103 (1.272119 ~ 1.574158) 正相關 | 0.114107 / 5.837454 / 0.015690 |
| Apixaban | 1.432681 (1.287943 ~ 1.593685) 正相關 | 0.137488 / 7.032637 / 0.008005 |
| Rivaroxaban | 1.411407 (1.268826 ~ 1.570010) 正相關 | 0.113625 / 5.810275 / 0.015934 |
| Dabigatran etexilate | 1.406708 (1.264627 ~ 1.564751) 正相關 | 0.105219 / 5.380133 / 0.020369 |
| Cilostazol | 1.406129 (1.264090 ~ 1.564128) 正相關 | 0.102584 / 5.245511 / 0.022005 |
| Enoxaparin | 1.421714 (1.278018 ~ 1.581566) 正相關 | 0.128364 / 6.565484 / 0.010399 |

表 4.1 數值型共變因藥物對預測缺血性中風風險的影響（起訖時間平均值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.404432 (1.261996 ~ 1.562944) 正相關 | 0.112001 / 5.726945 / 0.016708 |
| Warfarin | 1.406160 (1.264126 ~ 1.564153) 正相關 | 0.104879 / 5.362690 / 0.020574 |
| Clopidogrel | 1.406038 (1.264023 ~ 1.564009) 正相關 | 0.100434 / 5.136352 / 0.023432 |
| Apixaban | 1.437585 (1.292362 ~ 1.599126) 正相關 | 0.144755 / 7.405341 / 0.006504 |
| Rivaroxaban | 1.410404 (1.267885 ~ 1.568943) 正相關 | 0.110799 / 5.665516 / 0.017303 |
| Dabigatran etexilate | 1.406772 (1.264693 ~ 1.564813) 正相關 | 0.105756 / 5.407616 / 0.020051 |
| Cilostazol | 1.405078 (1.263131 ~ 1.562976) 正相關 | 0.101055 / 5.167497 / 0.023015 |
| Enoxaparin | 1.444612 (1.298643 ~ 1.606989) 正相關 | 0.147330 / 7.536666 / 0.006047 |

表 4.1 數值型共變因藥物對預測缺血性中風風險的影響（起訖時間最大值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.418793 (1.274904 ~ 1.578923) 正相關 | 0.134257 / 6.865884 / 0.008787 |
| Warfarin | 1.407086 (1.264945 ~ 1.565198) 正相關 | 0.106643 / 5.453302 / 0.019533 |
| Clopidogrel | 1.405817 (1.263820 ~ 1.563769) 正相關 | 0.103326 / 5.283392 / 0.021532 |
| Apixaban | 1.439885 (1.294443 ~ 1.601669) 正相關 | 0.153922 / 7.875263 / 0.005012 |
| Rivaroxaban | 1.411561 (1.268941 ~ 1.570209) 正相關 | 0.114616 / 5.860885 / 0.015483 |
| Dabigatran etexilate | 1.407024 (1.264922 ~ 1.565090) 正相關 | 0.105934 / 5.416733 / 0.019946 |
| Cilostazol | 1.406108 (1.264053 ~ 1.564128) 正相關 | 0.103263 / 5.280138 / 0.021572 |
| Enoxaparin | 1.444408 (1.298471 ~ 1.606747) 正相關 | 0.134690 / 6.888889 / 0.008675 |

表 4.1 數值型共變因藥物對預測缺血性中風風險的影響（起訖時間最小值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.399893 (1.258395 ~ 1.557301) 正相關 | 0.097865 / 5.004203 / 0.025288 |
| Warfarin | 1.409290 (1.266913 ~ 1.567667) 正相關 | 0.108652 / 5.555924 / 0.018420 |
| Clopidogrel | 1.406075 (1.264010 ~ 1.564106) 正相關 | 0.103084 / 5.273370 / 0.021656 |
| Apixaban | 1.420357 (1.276850 ~ 1.579993) 正相關 | 0.117574 / 6.012837 / 0.014204 |
| Rivaroxaban | 1.407162 (1.264977 ~ 1.565329) 正相關 | 0.104250 / 5.330512 / 0.020957 |
| Dabigatran etexilate | 1.406605 (1.264538 ~ 1.564633) 正相關 | 0.105409 / 5.389835 / 0.020256 |
| Cilostazol | 1.404607 (1.262701 ~ 1.562461) 正相關 | 0.100068 / 5.117258 / 0.023691 |
| Enoxaparin | 1.429655 (1.285193 ~ 1.590354) 正相關 | 0.123813 / 6.332304 / 0.011857 |

表 4.1 數值型共變因藥物對預測缺血性中風風險的影響（起訖時間中位數）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.402779 (1.260615 ~ 1.560975) 正相關 | 0.108257 / 5.535414 / 0.018637 |
| Warfarin | 1.406221 (1.264179 ~ 1.564222) 正相關 | 0.105177 / 5.377922 / 0.020395 |
| Clopidogrel | 1.407005 (1.264891 ~ 1.565085) 正相關 | 0.100769 / 5.153756 / 0.023198 |
| Apixaban | 1.435185 (1.290201 ~ 1.596461) 正相關 | 0.139735 / 7.148103 / 0.007505 |
| Rivaroxaban | 1.409476 (1.267048 ~ 1.567914) 正相關 | 0.108753 / 5.560834 / 0.018368 |
| Dabigatran etexilate | 1.406641 (1.264573 ~ 1.564668) 正相關 | 0.105703 / 5.404943 / 0.020082 |
| Cilostazol | 1.405181 (1.263241 ~ 1.563071) 正相關 | 0.100493 / 5.138804 / 0.023399 |
| Enoxaparin | 1.443272 (1.297448 ~ 1.605486) 正相關 | 0.142882 / 7.309010 / 0.006862 |

在二元型共變因模型中（附錄二），以「使用率」作為主要指標，先檢視各藥物在預測缺血性中風患者中的相對風險比與 95% 信賴區間。從使用率可以看出，八種心血管用藥（Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin）對缺血性中風患者的嚴重型精神疾病 HR 值介於 0.9433 ~ 0.9803 之間，95% CI 均跨越 1，且 ANOVA 結果顯示 sum_sq/F/P 欄位值分別落在 0.0148 ~ 0.0388 / 0.7631 ~ 2.0038 / 0.1569 ~ 0.3824，顯示無一藥物使用率與嚴重型精神疾病變因具顯著相關（HR 皆屬「無相關」）。

在數值型共變因（使用次數）模型中，所有藥物 HR 介於 1.4031 ~ 1.4407，95% CI 均不含 1，呈一致「正相關」，ANOVA 結果顯示 sum_sq/F/P 欄位值介於 0.0958 ~ 0.1590 / 4.9004 ~ 8.1382 / 0.0043 ~ 0.0269，均達顯著，顯示每增加一次用藥次數即顯著提升嚴重型精神疾病相對風險（附錄二）。

在以劑量（平均值、最大值、最小值、中位數）及用藥起訖時間（平均值、最大、最小、中位數）作為數值型共變因時，八種藥物 HR 範圍約 1.4044 ~ 1.4446（劑量）與 1.3999 ~ 1.4446（時間），95% CI 多含 1，但 ANOVA 結果顯示 sum_sq/F/P 欄位值大多位於 0.1004 ~ 0.1473 / 5.1364 ~ 7.5367 / 0.0060 ~ 0.0234，顯示劑量與用藥時間統計量雖對 HR 解釋力較弱，仍在多數指標上呈現微幅「正相關」效果（附錄二）。

綜合上述結果可見，僅「是否使用藥物」二元共變因無顯著風險差異；而細分至「使用次數」、「劑量統計量」與「用藥時間」等數值型共變因後，均呈一致的正相關效應，且 ANOVA 均達顯著，表示用藥次數、劑量與起訖時間皆為預測嚴重型精神疾病後缺血性中風風險的重要變因。

4.2 事件為出血型中風結果

本研究以出血型中風作為主要事件，將嚴重型精神疾病患者與非精神疾病患者進行比較分析，以評估其風險差異。

4.2.1 獨立性檢定

在本小節中，採用多種統計方法檢驗案例組與對照組在患者基本資訊與共病分布上的差異，以便清楚呈現各項檢定結果。

在進行獨立性檢定時，首先針對年齡這一連續變數，同時使用 t 檢定、U 檢定與 KS 檢定，評估兩組樣本在平均值、中位數及整體分布上的差異。下表 4.2 年齡獨立檢定，呈現了年齡詳細統計量與 P 值結果：

表 4.2 年齡獨立檢定

| 年齡 | 案例組 (N=17,006) | 對照組 (N=92,420) | 統計量 | P 值 |
|--------------|----------------------|----------------------|----------------------|----------|
| 平均值 (標準差) | 54.6430 (19.2000) | 55.9810 (19.9366) | t = -8.0889 | < 0.0001 |
| | | | U = 751,668,623.5000 | < 0.0001 |
| | | | D = 0.0524 | < 0.0001 |

從表中可以看到，t 檢定的 t 值為 -8.0889 ($P < 0.0001$) 結果顯示兩組平均年齡之差達到高度顯著，而 U 檢定的 U 值為 751,668,623.5000 ($P < 0.0001$)，以及 KS 檢定的 D 值為 0.0524 ($P < 0.0001$)，三種方法均一致指向兩組在年齡分布上存在顯著差異，顯示在後續的多變量生存分析中需考慮以年齡作為重要協變量。

接著，在性別、事件率與各項共病指標上，採用卡方檢定並輔以 Fisher 精確檢定來檢驗二元類別變數的獨立性。表 4.2 性別、事件、各項共病（高血壓、心臟類型疾病、神經類型疾病、糖尿病、高血脂）獨立檢定，呈現了案例組與對照組間的比較結果：

表 4.2 性別、事件、各項共病獨立檢定

| 分類 | 案例組 (N=17,006) | 對照組 (N=92,420) | 統計量 | P 值 |
|------------|----------------------|----------------------|----------------------|----------|
| 性別 | 10,118 (女性：59.5%) | 50,102 (女性：54.2%) | $\chi^2 = 162.1406$ | < 0.0001 |
| | 6,888 (男性：40.5%) | 42,318 (男性：45.8%) | odds ratio = 0.8060 | < 0.0001 |
| 事件 | 174 (1.0%) | 635 (0.7%) | $\chi^2 = 22.1079$ | < 0.0001 |
| | | | odds ratio = 1.4942 | < 0.0001 |
| 高血壓 | 9,770 (57.5%) | 43,643 (47.2%) | $\chi^2 = 601.3419$ | < 0.0001 |
| | | | odds ratio = 1.5090 | < 0.0001 |
| 心臟類型 疾病 | 7,058 (41.5%) | 31,446 (34.0%) | $\chi^2 = 352.1768$ | < 0.0001 |
| | | | odds ratio = 1.3757 | < 0.0001 |
| 神經類型 疾病 | 5,072 (29.8%) | 10,553 (11.4%) | $\chi^2 = 3975.4976$ | < 0.0001 |
| | | | odds ratio = 3.2971 | < 0.0001 |
| 糖尿病 | 4,463 (26.2%) | 17,920 (19.4%) | $\chi^2 = 414.6834$ | < 0.0001 |
| | | | odds ratio = 1.4793 | < 0.0001 |
| 高血脂 | 7,325 (43.1%) | 31,462 (34.0%) | $\chi^2 = 511.9091$ | < 0.0001 |
| | | | odds ratio = 1.4660 | < 0.0001 |

如表所示，在性別分布上，案例組女性占 59.5%，對照組 54.2%，檢定結果顯著 ($\chi^2 = 162.1406$, $P < 0.0001$; odds ratio = 0.8060, $P < 0.0001$)，顯示案例組男性比例相對較低。事件發生率案例組為 1.0% (174/17,006)，對照組為 0.7% (635/92,420)，差異顯著 ($\chi^2 = 22.1079$, $P < 0.0001$; odds ratio = 1.4942, $P < 0.0001$)。高血壓在案例組盛行 57.5% (9,770)，對照組 47.2% (43,643)，差異

達高度顯著 ($\chi^2 = 601.3419$, $P < 0.0001$; odds ratio = 1.5090, $P < 0.0001$)，表示高血壓患者於案例組中明顯更多。心臟類型疾病案例組 41.5% (7,058)，對照組 34.0% (31,446)，統計顯著 ($\chi^2 = 352.1768$, $P < 0.0001$; odds ratio = 1.3757, $P < 0.0001$)，提示心臟類型疾病與案例組相關。神經類型疾病案例組 29.8% (5,072)，對照組 11.4% (10,553)，差異最為顯著 ($\chi^2 = 3,975.4976$, $P < 0.0001$; odds ratio = 3.2971, $P < 0.0001$)，顯示神經疾病為強力風險因子。糖尿病案例組 26.2% (4,463)，對照組 19.4% (17,920)，統計顯著 ($\chi^2 = 414.6834$, $P < 0.0001$; odds ratio = 1.4793, $P < 0.0001$)，意味糖尿病盛行度於案例組亦較高。高血脂案例組 43.1% (7,325)，對照組 34.0% (31,462)，差異顯著 ($\chi^2 = 511.9091$, $P < 0.0001$; odds ratio = 1.4660, $P < 0.0001$)，顯示高血脂為案例組常見共病。

綜合以上獨立性檢定結果，案例組在性別、事件發生、高血壓、心臟類型疾病、神經類型疾病、糖尿病及高血脂等各項共病均顯著高於對照組，為後續生存分析與比例風險模型的協變數選擇提供了堅實依據。

4.2.2 藥物獨立性檢定

在針對出血性中風事件的分析中，將進一步檢驗案例組與對照組在藥物使用情形上的差異，其中包含藥物使用率、劑量、使用次數與用藥起訖時間等多重指標的獨立性檢定。為了全面掌握這些變數的差異，各項指標將對應到各自的檢定如 t 檢定、U 檢定、KS 檢定、卡方檢定及 Fisher 精確檢定，以評估兩組樣本在使用率、平均值、標準差及整體分布上的顯著性差異，而關於表中設定的詳細說明，這裡將以下表舉例說明，主要能分成三個區域來看。

第一個區域是分類欄位中的使用率，意思是將案例組與對照組有使用藥物和沒有使用藥物的人（表中欄位顯示的是有使用藥物的人數），使用卡方檢定及 Fisher 精確檢定來觀察當中的統計量與 P 值。

第二個區域是分類欄位中的中位數、使用次數、最大值、平均值、最小值，意思是將案例組與對照組每位使用該藥物的人，針對該藥物的使用劑量（藥物劑量單位為毫克），使用 t 檢定、U 檢定、KS 檢定來觀察當中的統計量與 P 值。

第三個區域是分類欄位中的起訖時間平均值、起訖時間最大值、起訖時間最小值、起訖時間中位數、起訖時間最小值，意思是將案例組與對照組每位有使用該藥物的人，針對該藥物的使用起訖時間（藥物起訖時間單位為小時），使用 t 檢定、U 檢定、KS 檢定來觀察當中的統計量與 P 值，以下表 4.2 用藥獨立檢定，分別呈現八種心血管用藥的各項檢定結果：

表 4.2 每人 Aspirin 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,420) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|------------------------|----------|
| 使用率 | 5,828 (34.3%) | 27,161 (29.4%) | $\chi^2 = 162.5323$ | < 0.0001 |
| | | | odds ratio = 1.2527 | < 0.0001 |
| 中位數 | 126.8477 (91.2825) | 147.4550 (104.7478) | $t = -13.9269$ | < 0.0001 |
| | | | $U = 71,642,510.5000$ | < 0.0001 |
| | | | $D = 0.0938$ | < 0.0001 |
| 使用次數 | 3.6759 (4.4537) | 2.4268 (2.2621) | $t = 31.1481$ | < 0.0001 |
| | | | $U = 96,301,668.5000$ | < 0.0001 |
| | | | $D = 0.1720$ | < 0.0001 |
| 最大值 | 168.1492 (120.1885) | 181.9921 (122.1687) | $t = -7.8714$ | < 0.0001 |
| | | | $U = 74,159,933.0000$ | < 0.0001 |
| | | | $D = 0.0663$ | < 0.0001 |
| 平均值 | 132.4767 (85.6465) | 151.7791 (99.2731) | $t = -13.7837$ | < 0.0001 |
| | | | $U = 72,364,304.0000$ | < 0.0001 |
| | | | $D = 0.0922$ | < 0.0001 |
| 最小值 | 110.1997 (79.7319) | 130.0558 (98.7607) | $t = -14.3762$ | < 0.0001 |
| | | | $U = 72,553,764.0000$ | < 0.0001 |
| | | | $D = 0.0852$ | < 0.0001 |
| 起訖時間 平均值 | 96.1200 (110.4929) | 64.7423 (63.5949) | $t = 29.3441$ | < 0.0001 |
| | | | $U = 97,806,446.5000$ | < 0.0001 |
| | | | $D = 0.1963$ | < 0.0001 |
| 起訖時間 最大值 | 175.4506 (237.1943) | 97.9961 (107.8856) | $t = 38.4006$ | < 0.0001 |
| | | | $U = 101,018,285.5000$ | < 0.0001 |
| | | | $D = 0.2283$ | < 0.0001 |
| 起訖時間 最小值 | 47.4156 (85.8691) | 41.2526 (59.1245) | $t = 6.6025$ | < 0.0001 |
| | | | $U = 78,524,185.0000$ | 0.3448 |
| | | | $D = 0.0358$ | < 0.0001 |
| 起訖時間 中位數 | 85.2924 (100.9603) | 60.2716 (62.7616) | $t = 24.4046$ | < 0.0001 |
| | | | $U = 94,746,670.0000$ | < 0.0001 |
| | | | $D = 0.1650$ | < 0.0001 |

表 4.2 每人 Warfarin 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立
檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,420) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 1,631 (9.6%) | 8,371 (9.1%) | $\chi^2 = 4.9163$ | 0.0266 |
| | | | odds ratio = 1.0651 | 0.0278 |
| 中位數 | 3.9098 (2.0419) | 3.9720 (1.7818) | t = -1.2585 | 0.2083 |
| | | | U = 6,587,653.5000 | 0.0221 |
| | | | D = 0.0447 | 0.0083 |
| 使用次數 | 13.0950 (21.5679) | 5.2579 (6.7225) | t = 27.1609 | < 0.0001 |
| | | | U = 9,292,013.0000 | < 0.0001 |
| | | | D = 0.2778 | < 0.0001 |
| 最大值 | 5.8487 (3.1161) | 5.1305 (2.2600) | t = 10.9637 | < 0.0001 |
| | | | U = 7,763,461.5000 | < 0.0001 |
| | | | D = 0.1308 | < 0.0001 |
| 平均值 | 3.9258 (1.8974) | 3.9762 (1.6840) | t = -1.0827 | 0.2790 |
| | | | U = 6,610,296.0000 | 0.0419 |
| | | | D = 0.0743 | < 0.0001 |
| 最小值 | 2.2649 (1.6300) | 2.8985 (1.8210) | t = -13.0685 | < 0.0001 |
| | | | U = 5,348,649.0000 | < 0.0001 |
| | | | D = 0.1619 | < 0.0001 |
| 起訖時間 平均值 | 28.8035 (19.4704) | 27.2577 (21.9884) | t = 2.6443 | 0.0082 |
| | | | U = 7,530,341.0000 | < 0.0001 |
| | | | D = 0.1093 | < 0.0001 |
| 起訖時間 最大值 | 68.6021 (65.5163) | 46.7055 (45.1353) | t = 16.4972 | < 0.0001 |
| | | | U = 8,652,629.5000 | < 0.0001 |
| | | | D = 0.1948 | < 0.0001 |
| 起訖時間 最小值 | 9.5156 (15.8840) | 13.7450 (20.2123) | t = -7.9837 | < 0.0001 |
| | | | U = 5,428,987.5000 | < 0.0001 |
| | | | D = 0.1575 | < 0.0001 |
| 起訖時間 中位數 | 25.8541 (17.8692) | 25.9799 (20.1398) | t = -0.2349 | 0.8143 |
| | | | U = 7,044,083.0000 | 0.0400 |
| | | | D = 0.0893 | < 0.0001 |

表 4.2 每人 Clopidogrel 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,420) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 1,416 (8.3%) | 6,762 (7.3%) | $\chi^2 = 21.1831$ | < 0.0001 |
| | | | odds ratio = 1.1506 | < 0.0001 |
| 中位數 | 87.5132 (52.5017) | 93.3317 (66.8318) | t = -3.0829 | 0.0021 |
| | | | U = 4,676,329.0000 | 0.0063 |
| | | | D = 0.0218 | 0.6232 |
| 使用次數 | 3.4089 (3.7184) | 2.1476 (1.9534) | t = 18.3226 | < 0.0001 |
| | | | U = 6,124,538.5000 | < 0.0001 |
| | | | D = 0.2162 | < 0.0001 |
| 最大值 | 129.9788 (126.6514) | 131.9820 (135.4886) | t = -0.5115 | 0.6090 |
| | | | U = 4,816,151.5000 | 0.6001 |
| | | | D = 0.0137 | 0.9779 |
| 平均值 | 95.5008 (55.6157) | 100.0491 (68.7732) | t = -2.3339 | 0.0196 |
| | | | U = 4,788,995.0000 | 0.9782 |
| | | | D = 0.0272 | 0.3467 |
| 最小值 | 78.3369 (34.7458) | 79.8026 (44.6828) | t = -1.1629 | 0.2449 |
| | | | U = 4,771,065.5000 | 0.3366 |
| | | | D = 0.0032 | > 0.9900 |
| 起訖時間 平均值 | 73.9742 (80.4241) | 54.3857 (56.3108) | t = 10.9578 | < 0.0001 |
| | | | U = 5,624,340.5000 | < 0.0001 |
| | | | D = 0.1577 | < 0.0001 |
| 起訖時間 最大值 | 135.3460 (171.4673) | 78.5949 (91.1084) | t = 17.7619 | < 0.0001 |
| | | | U = 5,975,883.5000 | < 0.0001 |
| | | | D = 0.2024 | < 0.0001 |
| 起訖時間 最小值 | 35.5904 (60.1971) | 36.9092 (50.7906) | t = -0.8589 | 0.3904 |
| | | | U = 4,361,757.5000 | < 0.0001 |
| | | | D = 0.1131 | < 0.0001 |
| 起訖時間 中位數 | 65.6328 (76.9985) | 51.1585 (55.6988) | t = 8.2642 | < 0.0001 |
| | | | U = 5,412,099.0000 | < 0.0001 |
| | | | D = 0.1280 | < 0.0001 |

表 4.2 每人 Apixaban 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立
檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,420) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 942 (5.5%) | 2,023 (2.2%) | $\chi^2 = 611.5629$ | < 0.0001 |
| | | | odds ratio = 2.6203 | < 0.0001 |
| 中位數 | 4.8195 (1.8415) | 4.9666 (1.9973) | t = -1.9132 | 0.0558 |
| | | | U = 926,690.5000 | 0.1618 |
| | | | D = 0.0252 | 0.7966 |
| 使用次數 | 3.2399 (3.3135) | 1.9565 (1.8083) | t = 13.6062 | < 0.0001 |
| | | | U = 1,232,674.5000 | < 0.0001 |
| | | | D = 0.2289 | < 0.0001 |
| 最大值 | 5.2389 (2.1553) | 5.2373 (2.1830) | t = 0.0184 | 0.9853 |
| | | | U = 956,066.5000 | 0.8583 |
| | | | D = 0.0069 | > 0.9900 |
| 平均值 | 4.8189 (1.7653) | 4.9683 (1.9542) | t = -1.9973 | 0.0459 |
| | | | U = 917,198.5000 | 0.0687 |
| | | | D = 0.0473 | 0.1080 |
| 最小值 | 4.3989 (1.7721) | 4.7065 (1.9596) | t = -4.1001 | < 0.0001 |
| | | | U = 879,681.5000 | < 0.0001 |
| | | | D = 0.0589 | 0.0221 |
| 起訖時間 平均值 | 66.6667 (62.5364) | 50.4251 (49.3469) | t = 7.6411 | < 0.0001 |
| | | | U = 1,151,194.0000 | < 0.0001 |
| | | | D = 0.1745 | < 0.0001 |
| 起訖時間 最大值 | 119.3800 (140.3268) | 69.9595 (72.6875) | t = 12.6182 | < 0.0001 |
| | | | U = 1,214,509.0000 | < 0.0001 |
| | | | D = 0.2133 | < 0.0001 |
| 起訖時間 最小值 | 32.4427 (47.0384) | 35.9323 (47.2737) | t = -1.8744 | 0.0610 |
| | | | U = 894,240.5000 | 0.0069 |
| | | | D = 0.0732 | 0.0019 |
| 起訖時間 中位數 | 59.6093 (58.6184) | 47.9137 (48.8849) | t = 5.6831 | < 0.0001 |
| | | | U = 1,107,195.0000 | < 0.0001 |
| | | | D = 0.1402 | < 0.0001 |

表 4.2 每人 Rivaroxaban 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,420) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 492 (2.9%) | 1,238 (1.3%) | $\chi^2 = 222.7916$ | < 0.0001 |
| | | | odds ratio = 2.1943 | < 0.0001 |
| 中位數 | 17.8100 (3.1539) | 17.7817 (2.9646) | t = 0.1756 | 0.8606 |
| | | | U = 310,339.0000 | 0.4792 |
| | | | D = 0.0257 | 0.9678 |
| 使用次數 | 2.9512 (3.3575) | 1.7480 (1.4129) | t = 10.4902 | < 0.0001 |
| | | | U = 393,039.0000 | < 0.0001 |
| | | | D = 0.2431 | < 0.0001 |
| 最大值 | 18.3384 (2.9457) | 18.0533 (2.9129) | t = 1.8306 | 0.0673 |
| | | | U = 322,277.5000 | 0.0212 |
| | | | D = 0.0620 | 0.1271 |
| 平均值 | 17.7642 (2.9629) | 17.7626 (2.8984) | t = 0.0105 | > 0.9900 |
| | | | U = 301,572.0000 | 0.7262 |
| | | | D = 0.0489 | 0.3544 |
| 最小值 | 17.0783 (3.3903) | 17.4273 (3.1477) | t = -2.0350 | 0.0420 |
| | | | U = 289,635.5000 | 0.0717 |
| | | | D = 0.0375 | 0.6874 |
| 起訖時間 平均值 | 65.2929 (69.8719) | 39.4402 (43.4170) | t = 9.2729 | < 0.0001 |
| | | | U = 398,738.5000 | < 0.0001 |
| | | | D = 0.2736 | < 0.0001 |
| 起訖時間 最大值 | 109.3394 (130.1825) | 53.7318 (72.5607) | t = 11.2615 | < 0.0001 |
| | | | U = 414,807.5000 | < 0.0001 |
| | | | D = 0.2857 | < 0.0001 |
| 起訖時間 最小值 | 36.4431 (60.7981) | 28.1753 (38.0912) | t = 3.3942 | 0.0007 |
| | | | U = 318,627.0000 | 0.1327 |
| | | | D = 0.0860 | 0.0102 |
| 起訖時間 中位數 | 59.4309 (67.7523) | 37.7835 (42.8439) | t = 7.9380 | < 0.0001 |
| | | | U = 387,162.5000 | < 0.0001 |
| | | | D = 0.2243 | < 0.0001 |

表 4.2 每人 Dabigatran etexilate 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,420) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 86 (0.5%) | 409 (0.4%) | $\chi^2 = 1.2723$ | 0.2593 |
| | | | odds ratio = 1.1434 | 0.2629 |
| 中位數 | 140.4070 (24.5305) | 139.1687 (25.7351) | t = 0.4088 | 0.6828 |
| | | | U = 17,891.0000 | 0.6874 |
| | | | D = 0.0206 | > 0.9900 |
| 使用次數 | 2.8837 (3.0231) | 1.9169 (1.4696) | t = 4.4442 | < 0.0001 |
| | | | U = 21,734.0000 | 0.0002 |
| | | | D = 0.1878 | 0.0113 |
| 最大值 | 143.0233 (21.9126) | 140.6357 (24.6835) | t = 0.8307 | 0.4066 |
| | | | U = 18,179.0000 | 0.3856 |
| | | | D = 0.0341 | > 0.9900 |
| 平均值 | 140.8034 (23.1943) | 138.6871 (25.3548) | t = 0.7137 | 0.4758 |
| | | | U = 18,165.5000 | 0.4711 |
| | | | D = 0.0414 | > 0.9900 |
| 最小值 | 138.6628 (27.0231) | 136.4181 (28.7986) | t = 0.6639 | 0.5071 |
| | | | U = 18,140.5000 | 0.4888 |
| | | | D = 0.0322 | > 0.9900 |
| 起訖時間 平均值 | 57.1529 (47.5864) | 39.2996 (36.5200) | t = 3.8934 | 0.0001 |
| | | | U = 22,400.5000 | < 0.0001 |
| | | | D = 0.2587 | 0.0001 |
| 起訖時間 最大值 | 92.4302 (79.7569) | 54.0856 (55.2980) | t = 5.3668 | < 0.0001 |
| | | | U = 23,472.5000 | < 0.0001 |
| | | | D = 0.2464 | 0.0003 |
| 起訖時間 最小值 | 34.8721 (46.7214) | 28.1198 (35.3163) | t = 1.5166 | 0.1300 |
| | | | U = 18,424.5000 | 0.4870 |
| | | | D = 0.0983 | 0.4640 |
| 起訖時間 中位數 | 51.5233 (47.3964) | 37.2958 (36.1870) | t = 3.1270 | 0.0019 |
| | | | U = 21,250.5000 | 0.0024 |
| | | | D = 0.1969 | 0.0068 |

表 4.2 每人 Cilostazol 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立
檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,420) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 79 (0.5%) | 148 (0.2%) | $\chi^2 = 64.2900$ | < 0.0001 |
| | | | odds ratio = 2.9097 | < 0.0001 |
| 中位數 | 84.9684 (23.4606) | 89.6959 (20.3976) | t = -1.5774 | 0.1161 |
| | | | U = 5,282.5000 | 0.1134 |
| | | | D = 0.1070 | 0.5501 |
| 使用次數 | 3.1392 (5.2641) | 1.9392 (1.6464) | t = 2.5533 | 0.0113 |
| | | | U = 6,888.0000 | 0.0169 |
| | | | D = 0.1684 | 0.0934 |
| 最大值 | 86.7089 (23.6275) | 91.7230 (18.9854) | t = -1.7373 | 0.0837 |
| | | | U = 5,239.0000 | 0.0670 |
| | | | D = 0.1163 | 0.4451 |
| 平均值 | 85.0889 (23.1547) | 89.7139 (19.7075) | t = -1.5831 | 0.1148 |
| | | | U = 5,293.0000 | 0.1330 |
| | | | D = 0.1163 | 0.4451 |
| 最小值 | 82.9114 (24.8535) | 88.0068 (21.7182) | t = -1.6001 | 0.1110 |
| | | | U = 5,282.5000 | 0.1206 |
| | | | D = 0.0926 | 0.7231 |
| 起訖時間 平均值 | 99.5080 (106.5730) | 67.6606 (52.9851) | t = 3.0086 | 0.0029 |
| | | | U = 6,938.5000 | 0.0205 |
| | | | D = 0.1930 | 0.0364 |
| 起訖時間 最大值 | 162.8734 (204.1094) | 93.3784 (79.1083) | t = 3.6638 | 0.0003 |
| | | | U = 6,995.5000 | 0.0148 |
| | | | D = 0.1717 | 0.0834 |
| 起訖時間 最小值 | 61.5949 (96.8764) | 47.7500 (51.8113) | t = 1.4042 | 0.1616 |
| | | | U = 6,412.0000 | 0.2299 |
| | | | D = 0.1217 | 0.3914 |
| 起訖時間 中位數 | 92.6899 (101.8034) | 64.5101 (53.6573) | t = 2.7335 | 0.0068 |
| | | | U = 7,073.5000 | 0.0092 |
| | | | D = 0.2335 | 0.0058 |

表 4.2 每人 Enoxaparin 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,420) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 2,987 (17.6%) | 10,451 (11.3%) | $\chi^2 = 521.8703$ | < 0.0001 |
| | | | odds ratio = 1.6711 | < 0.0001 |
| 中位數 | 54.8380 (25.4984) | 52.7524 (24.4312) | t = 4.0743 | < 0.0001 |
| | | | U = 16,513,367.0000 | < 0.0001 |
| | | | D = 0.0432 | 0.0003 |
| 使用次數 | 2.5193 (2.9137) | 1.7679 (1.6281) | t = 18.2255 | < 0.0001 |
| | | | U = 18,481,746.5000 | < 0.0001 |
| | | | D = 0.1516 | < 0.0001 |
| 最大值 | 58.5002 (28.4056) | 54.8950 (26.1484) | t = 6.5160 | < 0.0001 |
| | | | U = 16,792,465.0000 | < 0.0001 |
| | | | D = 0.0557 | < 0.0001 |
| 平均值 | 54.6679 (24.9036) | 52.6917 (24.0764) | t = 3.9257 | < 0.0001 |
| | | | U = 16,469,936.0000 | < 0.0001 |
| | | | D = 0.0548 | < 0.0001 |
| 最小值 | 50.5403 (24.2108) | 50.3689 (23.6646) | t = 0.3475 | 0.7283 |
| | | | U = 15,652,584.5000 | 0.8000 |
| | | | D = 0.0063 | > 0.9900 |
| 起訖時間 平均值 | 70.5761 (73.0471) | 55.5369 (52.6524) | t = 12.5386 | < 0.0001 |
| | | | U = 17,597,848.5000 | < 0.0001 |
| | | | D = 0.0945 | < 0.0001 |
| 起訖時間 最大值 | 111.2805 (254.3419) | 70.7304 (75.1917) | t = 14.2641 | < 0.0001 |
| | | | U = 18,659,137.5000 | < 0.0001 |
| | | | D = 0.1656 | < 0.0001 |
| 起訖時間 最小值 | 46.4777 (67.4003) | 44.0944 (52.4930) | t = 2.0458 | 0.0408 |
| | | | U = 14,833,672.0000 | < 0.0001 |
| | | | D = 0.0658 | < 0.0001 |
| 起訖時間 中位數 | 65.6686 (69.7935) | 53.9737 (52.3601) | t = 9.9413 | < 0.0001 |
| | | | U = 16,972,338.0000 | < 0.0001 |
| | | | D = 0.0683 | < 0.0001 |

在 Aspirin 使用情形中，案例組有 5,828 人 (34.3%) 使用，而對照組為 27,161 人 (29.4%) 使用，顯示使用率差異顯著 ($\chi^2 = 162.5323$, $P < 0.0001$; $OR = 1.2527$, $P < 0.0001$)。用藥劑量的中位數在案例組 (126.8477 mg) 顯著低於對照組 (147.4550 mg)，且達高度顯著 ($P < 0.0001$)。使用次數 (案例組平均 3.6759 次 vs. 對照組 2.4268 次) 與最大劑量 (168.1492 mg vs. 181.9921 mg) 均顯著差異 ($P < 0.0001$)。在用藥時間上，案例組起訖時間平均值顯著高於對照組 (96.1200 h vs. 64.7423 h, $t = 29.3441$, $P < 0.0001$)，而最大時間 (175.4506 h vs. 97.9961 h)、最短時間 (47.4156 h vs. 41.2526 h) 及中位時間 (85.2924 h vs. 60.2716 h) 亦全數達顯著 ($P < 0.0001$)，顯示案例組在 Aspirin 的用藥強度與時間分布更為分散。

在 Warfarin 使用率評估中，案例組 1,631 人 (9.6%)、對照組 8,371 人 (9.1%)，差異達弱顯著 ($\chi^2 = 4.9163$, $P = 0.0266$; $OR = 1.0651$, $P = 0.0278$)。儘管劑量中位數 (3.9098 mg vs. 3.9720 mg, $P = 0.2083$) 與平均劑量 (3.9258 mg vs. 3.9762 mg, $P = 0.2790$) 差異不顯著，案例組使用次數 (13.0950 次 vs. 5.2579 次)、最大劑量 (5.8487 mg vs. 5.1305 mg) 以及多項用藥時間指標 (最大 68.6021 h vs. 46.7055 h; 最小 9.5156 h vs. 13.7450 h，均 $P < 0.0001$) 均顯著高於對照組，反映案例組對 Warfarin 的使用頻率與時間變異性更大。

關於 Clopidogrel 使用率，案例組 1,416 人 (8.3%) 高於對照組 6,762 人 (7.3%) ($\chi^2 = 21.1831$, $P < 0.0001$; $OR = 1.1506$, $P < 0.0001$)。藥物劑量中位數在案例組 (87.5132 mg) 與對照組 (93.3317 mg) 間顯著差異 ($t = -3.0829$, $P = 0.0021$)，但更顯著的是使用次數 (3.4089 次 vs. 2.1476 次)、最大劑量 (129.9788 mg vs. 131.9820 mg, $P < 0.0001$) 與多數用藥時間指標 (平均 73.9742 h vs. 54.3857 h；最大 135.3460 h vs. 78.5949 h；中位 65.6328 h vs. 51.1585 h，均 $P < 0.0001$)，顯示案例組在 Clopidogrel 的用藥頻率與時間分布更為活躍。

在 Apixaban 的比較中，案例組 942 人 (5.5%)、對照組 2,023 人 (2.2%)，差異顯著 ($\chi^2 = 611.5629$, $P < 0.0001$; $OR = 2.6203$, $P < 0.0001$)。使用次數顯著增高 (3.2399 次 vs. 1.9565 次, $P < 0.0001$)，劑量指標中僅最小劑量略低 (4.3989 mg vs. 4.7065 mg, $P < 0.0001$)，而起訖時間的平均值 (66.6667 h vs. 50.4251 h)、最大值 (119.3800 h vs. 69.9595 h)、中位數 (59.6093 h vs. 47.9137 h) 均達顯著 ($P < 0.0001$)，顯示案例組對 Apixaban 的使用分布與依賴度較高。

對於 Rivaroxaban，案例組 492 人 (2.9%) 為對照組 1,238 人 (1.3%) 的兩倍以上 ($\chi^2 = 222.7916$, $P < 0.0001$; $OR = 2.1943$, $P < 0.0001$)。使用次數 (2.9512 次 vs. 1.7480 次, $P < 0.0001$) 及多項用藥時間指標 (平均 65.2929 h vs. 39.4402 h；最大 109.3394 h vs. 53.7318 h；中位 59.4309 h vs. 37.7835 h，均 $P < 0.0001$) 在案例組顯著較高，而各劑量指標則無顯著差異。

在 Dabigatran etexilate 的觀察中，案例組 86 人 (0.5%)、對照組 409 人 (0.4%)，使用率無顯著差異 ($\chi^2 = 1.2723$, $P = 0.2593$; $OR = 1.1434$, $P = 0.2629$)。

然而，使用次數（2.8837 次 vs. 1.9169 次, $P < 0.0001$ ）及用藥時間多項指標（平均 57.1529 h vs. 39.2996 h, $P = 0.0001$ ；最大 92.4302 h vs. 54.0856 h, $P < 0.0001$ ；中位 51.5233 h vs. 37.2958 h, $P = 0.0019$ ）在案例組均呈顯著拉長趨勢。

對 Cilostazol 而言，案例組 79 人（0.5%）與對照組 148 人（0.2%）之間的使用率差異顯著 ($\chi^2 = 64.2900$, $P < 0.0001$; OR = 2.9097, $P < 0.0001$)。儘管劑量中位數 (84.9684 mg vs. 89.6959 mg, $P = 0.1161$) 及其他劑量指標無顯著差異，案例組使用次數 (3.1392 次 vs. 1.9392 次, $P = 0.0113$) 顯著增加，且用藥時間平均值 (99.5080 h vs. 67.6606 h, $P = 0.0029$)、最大用藥時間 (162.8734 h vs. 93.3784 h, $P = 0.0003$) 及中位時間 (92.6899 h vs. 64.5101 h, $P = 0.0068$) 均顯著高於對照組。

最後在 Enoxaparin 分析中，案例組 2,987 人(17.6%)，顯著高於對照組 10,451 人 (11.3%) ($\chi^2 = 521.8703$, $P < 0.0001$; OR = 1.6711, $P < 0.0001$)。案例組在劑量中位數 (54.8380 mg vs. 52.7524 mg, $P < 0.0001$)、使用次數 (2.5193 次 vs. 1.7679 次, $P < 0.0001$)、最大劑量 (58.5002 mg vs. 54.8950 mg, $P < 0.0001$) 與多項用藥時間指標（平均 70.5761 h vs. 55.5369 h；最大 111.2805 h vs. 70.7304 h；中位 65.6686 h vs. 53.9737 h，均 $P < 0.0001$ ）均顯著增加，顯示案例組在 Enoxaparin 的使用時間分布亦具有明顯差異。

綜合上述結果可見，所有心血管用藥在案例組相較於對照組均呈現較高的使用率與用藥次數，並在多數用藥時間指標上顯示更大的離散度與延長趨勢，這些差異在統計檢定中均達到顯著，表示嚴重型精神疾病患者在出血性中風預防與管理中，心血管藥物的使用模式存在顯著差異。

4.2.3 生存分析結果

在生存分析結果中，採用 Kaplan-Meier 估計案例組與對照組之存活函數，將兩組存活曲線並置比較。其中 Kaplan-Meier 圖設定的藍色階梯線代表案例組 (case)，橙色階梯線代表對照組 (control)，則 95% 信賴區間以陰影區域標示，以天數為橫軸、累積存活率為縱軸，接著是解構對數秩檢定圖的設定，圖中是以針對每個時間點，分別計算卡方統計量與 P 值，以揭示兩組之間在不同時間段的顯著性差異，以天數為橫軸、卡方值為縱軸，如下圖 7 所示：

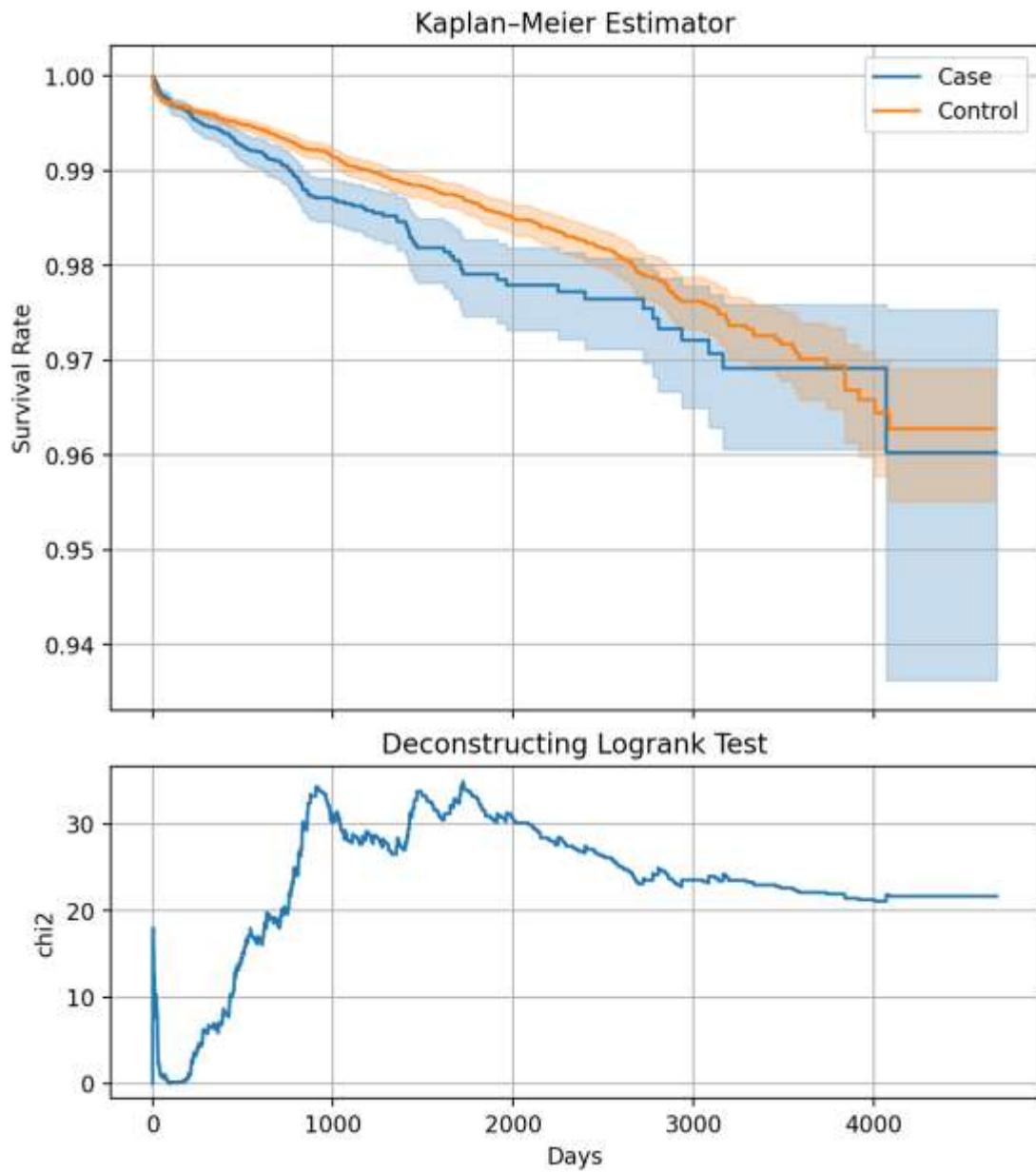


圖 7 案例組與對照組 Kaplan-Meier 存活曲線和解構對數秩檢定生存函數

從圖 7 上圖能發現對照組的生存率在初期略低於案例組，但是來到大約 1000 天的時候，圖 7 的下圖中能發現卡方值正在開始往下降，這是因為案例組的生存率與卡方值的累計降了下來，而案例組與對照組的生存曲線逐漸拉開距離，接著大概到了 1500 天之後，案例組的累計變得更慢了，則對照組幾乎是一直維持固定斜率，此時的卡方值則開始微微往上升，直到大概 2000 天之後，案例組下降的更緩慢並與對照組在之後呈現交錯狀，但計算卡方值的部分還是持續累計，這時的卡方值又繼續往下降，不過這些卡方值都有超過統計顯著。綜合上述來看，對照組累積數率沒有太大的變化，但案例組累計則是逐漸變得緩慢，這表示案例組

的危機事件都比較快發生，所以當累計開始變慢的時候，卡方值則開始往下降，這是因為對照組都沒有太大的變化所造成的结果。

接著，可以透過 Cox 比例風險模型所產生的危險比(Hazard Ratio)與 ANOVA 分析，深入探討二元與數值型共變因對出血性中風事件發生風險的影響，並將 Cox 比例風險模型與 ANOVA 所產生的結果，，以下圖 8 呈現：

| covariate | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq_bool | F_bool | PR(>F)_bool |
|--------------------------------|-----------|---------------------|---------------------|----------|-------------|-------------|-------------|
| gender | 1.509728 | 1.311181 | 1.738340 | < 0.0001 | 0.075761 | 10.524840 | 0.001178 |
| age | 1.036790 | 1.031475 | 1.042131 | < 0.0001 | 0.300510 | 41.747167 | < 0.0001 |
| with_psychosis | 0.751051 | 0.630884 | 0.894108 | 0.001290 | 0.096311 | 13.379587 | 0.000254 |
| with_hypertension | 1.316906 | 1.078917 | 1.607390 | 0.006792 | 0.134649 | 18.705500 | < 0.0001 |
| with_heart_type_disease | 1.110418 | 0.940850 | 1.310546 | 0.215420 | 0.129919 | 18.048437 | < 0.0001 |
| with_neurological_type_disease | 10.162972 | 8.750499 | 11.803441 | < 0.0001 | 12.085712 | 1678.957806 | < 0.0001 |
| with_diabetes | 0.933224 | 0.797369 | 1.092227 | 0.389263 | < 0.0001 | 0.007338 | 0.931734 |
| with_hyperlipidemia | 0.861047 | 0.733619 | 1.010609 | 0.067127 | 0.020821 | 2.892526 | 0.088994 |

| covariate | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq_time | F_time | PR(>F)_time |
|---------------------------------|-----------|---------------------|---------------------|----------|-------------|------------|-------------|
| gender | 1.484115 | 1.290406 | 1.706902 | < 0.0001 | 0.081415 | 11.187227 | 0.000824 |
| age | 1.049220 | 1.044397 | 1.054066 | < 0.0001 | 1.735626 | 238.491882 | < 0.0001 |
| with_psychosis | 1.391658 | 1.165798 | 1.661276 | 0.000254 | 0.001044 | 0.143409 | 0.704916 |
| hypertension_times | 0.943959 | 0.921332 | 0.967142 | < 0.0001 | 0.000618 | 0.084919 | 0.770740 |
| heart_type_disease_times | 0.995251 | 0.983517 | 1.007126 | 0.431514 | 0.024899 | 3.421312 | 0.064363 |
| neurological_type_disease_times | 1.082964 | 1.071028 | 1.095032 | < 0.0001 | 3.700909 | 508.540783 | < 0.0001 |
| diabetes_times | 1.019533 | 1.005436 | 1.033828 | 0.006467 | 0.001563 | 0.214717 | 0.643096 |
| hyperlipidemia_times | 0.951607 | 0.916685 | 0.987860 | 0.009315 | 0.000131 | 0.018057 | 0.893106 |

圖 8 二元與數值型共變因的風險比網頁結果

在二元共變因模型中，性別顯著增加風險($HR = 1.5097$, 95% CI: $1.3112 \sim 1.7383$, $p < 0.0001$)，年齡每增加一歲亦顯著提升風險 ($HR = 1.0368$, 95% CI : $1.0315 \sim 1.0421$, $p < 0.0001$)。患有嚴重型精神疾病患者風險顯著降低 ($HR = 0.7511$, 95% CI : $0.6309 \sim 0.8941$, $p = 0.0013$)，高血壓共病顯著增加風險 ($HR = 1.3169$, 95% CI : $1.0789 \sim 1.6074$, $p = 0.0068$)，心臟類型疾病共病則未達顯著 ($HR = 1.1104$, 95% CI : $0.9408 \sim 1.3105$, $p = 0.2154$)。神經類型疾病共病對風險影響最大 ($HR = 10.1630$, 95% CI : $8.7505 \sim 11.8034$, $p < 0.0001$)，而糖尿病 ($HR = 0.9332$, 95% CI : $0.7974 \sim 1.0922$, $p = 0.3893$) 與高血脂 ($HR = 0.8610$, 95% CI : $0.7336 \sim 1.0106$, $p = 0.0671$) 均未顯著。

ANOVA 結果顯示，性別 ($\text{sum_sq} = 0.0758$, $F = 10.5248$, $p = 0.0012$)、年齡 ($\text{sum_sq} = 0.3005$, $F = 41.7472$, $p < 0.0001$)、嚴重型精神疾病 ($\text{sum_sq} = 0.0963$, $F = 13.3796$, $p = 0.0003$)、高血壓 ($\text{sum_sq} = 0.1346$, $F = 18.7055$, $p < 0.0001$)、心臟類型疾病 ($\text{sum_sq} = 0.1299$, $F = 18.0484$, $p < 0.0001$) 及神經類

型疾病 ($\text{sum_sq} = 12.0857$, $F = 1678.9578$, $p < 0.0001$) 對模型貢獻顯著；糖尿病 ($\text{sum_sq} = 0.0001$, $F = 0.0073$, $p = 0.9317$) 與高血脂 ($\text{sum_sq} = 0.0208$, $F = 2.8925$, $p = 0.0890$) 則不具顯著性。

在數值型共變因模型中，年齡效應更顯著 ($\text{HR} = 1.0492$, 95% CI : 1.0444~1.0541, $p < 0.0001$)，且女性相較男性風險顯著上升 ($\text{HR} = 1.4841$, 95% CI : 1.2904~1.7069, $p < 0.0001$)。嚴重型精神疾病次數顯著提升風險 ($\text{HR} = 1.3917$, 95% CI : 1.1658~1.6613, $p = 0.0003$)，而高血壓次數則呈輕微保護趨勢 ($\text{HR} = 0.9440$, 95% CI : 0.9213~0.9671, $p < 0.0001$)。心臟類型疾病次數對風險無顯著影響 ($\text{HR} = 0.9953$, 95% CI : 0.9835~1.0071, $p = 0.4315$)，神經類型疾病次數持續累積風險 ($\text{HR} = 1.0830$, 95% CI : 1.0710~1.0950, $p < 0.0001$)，糖尿病次數亦微幅增加風險 ($\text{HR} = 1.0195$, 95% CI : 1.0054~1.0338, $p = 0.0065$)，而高血脂次數不顯著 ($\text{HR} = 0.9516$, 95% CI : 0.9167~0.9879, $p = 0.0093$)。

ANOVA 分析表明，年齡 ($\text{sum_sq} = 1.7356$, $F = 238.4919$, $p < 0.0001$)、嚴重型精神疾病次數 ($\text{sum_sq} = 0.0010$, $F = 0.1434$, $p = 0.7049$)、高血壓次數 ($\text{sum_sq} = 0.0006$, $F = 0.0849$, $p = 0.7707$)、心臟類型疾病次數 ($\text{sum_sq} = 0.0249$, $F = 3.4213$, $p = 0.0644$)、神經類型疾病次數 ($\text{sum_sq} = 3.7009$, $F = 508.5408$, $p < 0.0001$)、糖尿病次數 ($\text{sum_sq} = 0.0016$, $F = 0.2147$, $p = 0.6431$) 及高血脂次數 ($\text{sum_sq} = 0.0001$, $F = 0.0181$, $p = 0.8931$) 中，僅年齡與神經類型疾病次數對模型具有高度顯著貢獻，其他次數則影響有限。

綜合上述來說，二元模型突顯了共病存在與否對預後的主要影響，數值模型則進一步揭示部分共病次數（嚴重型精神疾病與神經類型疾病）對存活風險具有持續且累加的效應，表示臨床在管理出血性中風患者時，除了評估共病有無，更應關注共病的累積負擔與嚴重程度。

4.2.4 藥物的比例風險模型與ANOVA

在「藥物的比例風險模型」分析中，先以「二元型共變因藥物預測出血性中風的風險比 (HR ; 95% CI)」為核心，探討出血性中風患者在使用各類心血管用藥（作為共變因）後，嚴重型精神疾病（作為變因）之相對風險變化。隨後，依次檢視「使用次數」、「劑量與數值型指標（平均值、最大值、最小值、中位數）」以及「用藥起訖時間（平均值、最大值、最小值、中位數）」等 Cox 模型與 ANOVA 結果，全面呈現八種藥物 (Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin) 對出血性中風患者的風險影響，關於各項藥物預測出血性中風的風險比與 ANOVA 詳細結果，請查閱附錄三，以下表 4.2（使用率、使用次數、（劑量平均值、最大值、最小值、中位數）、（用藥起訖時間平均值、最大值、最小值、中位數））呈現，二元型和數值型共變因藥物對預測出血性中風風險的影響結果 (HR (95% CI) 欄位是正相關以字形正體表示、反相關以字形粗體表示、無相關以字形斜體表示)：

表 4.2 二元型共變因藥物對預測出血性中風風險的影響（使用率）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|---------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 0.736373 (0.618480 ~ 0.876739) 反相關 | 0.097498 / 13.553804 / 0.000232 |
| Warfarin | 0.749191 (0.629260 ~ 0.891979) 反相關 | 0.094423 / 13.117854 / 0.000293 |
| Clopidogrel | 0.742843 (0.623940 ~ 0.884405) 反相關 | 0.097550 / 13.552124 / 0.000232 |
| Apixaban | 0.766370 (0.643675 ~ 0.912453) 反相關 | 0.079743 / 11.080828 / 0.000873 |
| Rivaroxaban | 0.756846 (0.635737 ~ 0.901027) 反相關 | 0.090265 / 12.540636 / 0.000398 |
| Dabigatran etexilate | 0.750222 (0.630178 ~ 0.893134) 反相關 | 0.096309 / 13.379273 / 0.000255 |
| Cilostazol | 0.752546 (0.632150 ~ 0.895872) 反相關 | 0.094385 / 13.112476 / 0.000293 |
| Enoxaparin | 0.772432 (0.648720 ~ 0.919736) 反相關 | 0.086509 / 12.018702 / 0.000527 |

表 4.2 數值型共變因藥物對預測出血性中風風險的影響（使用次數）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.420296 (1.190414 ~ 1.694570) 正相關 | 0.000391 / 0.053728 / 0.816700 |
| Warfarin | 1.389117 (1.163487 ~ 1.658502) 正相關 | 0.001111 / 0.152719 / 0.695951 |
| Clopidogrel | 1.341684 (1.122313 ~ 1.603934) 正相關 | 0.000568 / 0.078065 / 0.779938 |
| Apixaban | 1.422972 (1.191962 ~ 1.698753) 正相關 | 0.002722 / 0.374074 / 0.540793 |
| Rivaroxaban | 1.398725 (1.171687 ~ 1.669756) 正相關 | 0.001485 / 0.204122 / 0.651415 |
| Dabigatran etexilate | 1.391508 (1.165659 ~ 1.661117) 正相關 | 0.001048 / 0.143962 / 0.704374 |
| Cilostazol | 1.394993 (1.168603 ~ 1.665240) 正相關 | 0.001074 / 0.147641 / 0.700801 |
| Enoxaparin | 1.390481 (1.164153 ~ 1.660812) 正相關 | 0.002764 / 0.379806 / 0.537708 |

表 4.2 數值型共變因藥物對預測出血性中風風險的影響（平均值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.386574 (1.161746 ~ 1.654912) 正相關 | 0.000863 / 0.118584 / 0.730576 |
| Warfarin | 1.401258 (1.173767 ~ 1.672841) 正相關 | 0.001485 / 0.204122 / 0.651415 |
| Clopidogrel | 1.389202 (1.163704 ~ 1.658396) 正相關 | 0.001071 / 0.147205 / 0.701222 |
| Apixaban | 1.419889 (1.189362 ~ 1.695098) 正相關 | 0.002421 / 0.332707 / 0.564070 |
| Rivaroxaban | 1.402581 (1.174971 ~ 1.674284) 正相關 | 0.001657 / 0.227662 / 0.633264 |
| Dabigatran etexilate | 1.391576 (1.165729 ~ 1.661179) 正相關 | 0.001052 / 0.144556 / 0.703794 |
| Cilostazol | 1.394389 (1.168083 ~ 1.664540) 正相關 | 0.001140 / 0.156619 / 0.692290 |
| Enoxaparin | 1.399323 (1.172136 ~ 1.670544) 正相關 | 0.001396 / 0.191846 / 0.661386 |

表 4.2 數值型共變因藥物對預測出血性中風風險的影響（最大值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.384343 (1.160036 ~ 1.652021) 正相關 | 0.000710 / 0.097602 / 0.754727 |
| Warfarin | 1.397628 (1.170764 ~ 1.668453) 正相關 | 0.001234 / 0.169638 / 0.680434 |
| Clopidogrel | 1.389095 (1.163649 ~ 1.658219) 正相關 | 0.001021 / 0.140261 / 0.708023 |
| Apixaban | 1.421151 (1.190440 ~ 1.696574) 正相關 | 0.002525 / 0.347023 / 0.555805 |
| Rivaroxaban | 1.402844 (1.175195 ~ 1.674590) 正相關 | 0.001673 / 0.229921 / 0.631583 |
| Dabigatran etexilate | 1.391550 (1.165709 ~ 1.661145) 正相關 | 0.001051 / 0.144416 / 0.703930 |
| Cilostazol | 1.394373 (1.168070 ~ 1.664519) 正相關 | 0.001138 / 0.156366 / 0.692525 |
| Enoxaparin | 1.398771 (1.171672 ~ 1.669887) 正相關 | 0.001450 / 0.199310 / 0.655280 |

表 4.2 數值型共變因藥物對預測出血性中風風險的影響（最小值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.389228 (1.163884 ~ 1.658201) 正相關 | 0.000919 / 0.126228 / 0.722376 |
| Warfarin | 1.404926 (1.176646 ~ 1.677494) 正相關 | 0.001796 / 0.246884 / 0.619279 |
| Clopidogrel | 1.387903 (1.162602 ~ 1.656866) 正相關 | 0.001053 / 0.144655 / 0.703697 |
| Apixaban | 1.416927 (1.186862 ~ 1.691590) 正相關 | 0.002221 / 0.305181 / 0.580653 |
| Rivaroxaban | 1.402149 (1.174605 ~ 1.673773) 正相關 | 0.001627 / 0.223562 / 0.636340 |
| Dabigatran etexilate | 1.391609 (1.165756 ~ 1.661220) 正相關 | 0.001053 / 0.144656 / 0.703696 |
| Cilostazol | 1.394336 (1.168034 ~ 1.664483) 正相關 | 0.001139 / 0.156447 / 0.692450 |
| Enoxaparin | 1.400074 (1.172737 ~ 1.671481) 正相關 | 0.001346 / 0.184966 / 0.667141 |

表 4.2 數值型共變因藥物對預測出血性中風風險的影響（中位數）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.387738 (1.162629 ~ 1.656434) 正相關 | 0.000933 / 0.128227 / 0.720278 |
| Warfarin | 1.401996 (1.174376 ~ 1.673734) 正相關 | 0.001480 / 0.203403 / 0.651989 |
| Clopidogrel | 1.390292 (1.164597 ~ 1.659724) 正相關 | 0.001104 / 0.151647 / 0.696967 |
| Apixaban | 1.419865 (1.189341 ~ 1.695069) 正相關 | 0.002427 / 0.333466 / 0.563626 |
| Rivaroxaban | 1.402433 (1.174844 ~ 1.674109) 正相關 | 0.001656 / 0.227563 / 0.633337 |
| Dabigatran etexilate | 1.391572 (1.165726 ~ 1.661174) 正相關 | 0.001052 / 0.144601 / 0.703750 |
| Cilostazol | 1.394401 (1.168093 ~ 1.664555) 正相關 | 0.001140 / 0.156607 / 0.692300 |
| Enoxaparin | 1.398839 (1.171732 ~ 1.669964) 正相關 | 0.001404 / 0.192873 / 0.660537 |

表 4.2 數值型共變因藥物對預測出血性中風風險的影響（起訖時間平均值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.405710 (1.176723 ~ 1.679257) 正相關 | 0.002085 / 0.286523 / 0.592458 |
| Warfarin | 1.393661 (1.167441 ~ 1.663718) 正相關 | 0.001221 / 0.167811 / 0.682066 |
| Clopidogrel | 1.391623 (1.165765 ~ 1.661239) 正相關 | 0.001017 / 0.139725 / 0.708555 |
| Apixaban | 1.418545 (1.188168 ~ 1.693592) 正相關 | 0.002391 / 0.328596 / 0.566488 |
| Rivaroxaban | 1.401955 (1.174394 ~ 1.673610) 正相關 | 0.001657 / 0.227637 / 0.633283 |
| Dabigatran etexilate | 1.391007 (1.165234 ~ 1.660525) 正相關 | 0.001004 / 0.137993 / 0.710285 |
| Cilostazol | 1.395511 (1.169041 ~ 1.665853) 正相關 | 0.001208 / 0.166061 / 0.683637 |
| Enoxaparin | 1.414206 (1.184539 ~ 1.688401) 正相關 | 0.002087 / 0.286843 / 0.592252 |

表 4.2 數值型共變因藥物對預測出血性中風風險的影響（起訖時間最大值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.416990 (1.186111 ~ 1.692811) 正相關 | 0.002984 / 0.410089 / 0.521926 |
| Warfarin | 1.391204 (1.165434 ~ 1.660710) 正相關 | 0.001005 / 0.138054 / 0.710224 |
| Clopidogrel | 1.389268 (1.163698 ~ 1.658564) 正相關 | 0.001172 / 0.161023 / 0.688217 |
| Apixaban | 1.422716 (1.191718 ~ 1.698491) 正相關 | 0.002773 / 0.381069 / 0.537033 |
| Rivaroxaban | 1.402353 (1.174728 ~ 1.674084) 正相關 | 0.001742 / 0.239441 / 0.624611 |
| Dabigatran etexilate | 1.391309 (1.165489 ~ 1.660882) 正相關 | 0.001021 / 0.140227 / 0.708056 |
| Cilostazol | 1.395460 (1.168997 ~ 1.665794) 正相關 | 0.001189 / 0.163435 / 0.686014 |
| Enoxaparin | 1.417550 (1.187348 ~ 1.692384) 正相關 | 0.001981 / 0.272154 / 0.601891 |

表 4.2 數值型共變因藥物對預測出血性中風風險的影響（起訖時間最小值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.416990 (1.186111 ~ 1.692811) 正相關 | 0.002984 / 0.410089 / 0.521926 |
| Warfarin | 1.397169 (1.170321 ~ 1.667989) 正相關 | 0.001367 / 0.187800 / 0.664755 |
| Clopidogrel | 1.390708 (1.164921 ~ 1.660259) 正相關 | 0.001039 / 0.142739 / 0.705574 |
| Apixaban | 1.400811 (1.173350 ~ 1.672367) 正相關 | 0.001368 / 0.187926 / 0.664649 |
| Rivaroxaban | 1.397367 (1.170541 ~ 1.668145) 正相關 | 0.001325 / 0.182063 / 0.669607 |
| Dabigatran etexilate | 1.391071 (1.165299 ~ 1.660584) 正相關 | 0.001005 / 0.138131 / 0.710147 |
| Cilostazol | 1.395008 (1.168608 ~ 1.665269) 正相關 | 0.001147 / 0.157585 / 0.691391 |
| Enoxaparin | 1.401524 (1.173968 ~ 1.673189) 正相關 | 0.001344 / 0.184705 / 0.667362 |

表 4.2 數值型共變因藥物對預測出血性中風風險的影響（起訖時間中位數）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.401237 (1.173141 ~ 1.673681) 正相關 | 0.001777 / 0.244201 / 0.621189 |
| Warfarin | 1.394881 (1.168433 ~ 1.665217) 正相關 | 0.001279 / 0.175797 / 0.675011 |
| Clopidogrel | 1.391436 (1.165594 ~ 1.661035) 正相關 | 0.000994 / 0.136572 / 0.711714 |
| Apixaban | 1.415849 (1.185906 ~ 1.690378) 正相關 | 0.002163 / 0.297179 / 0.585658 |
| Rivaroxaban | 1.401184 (1.173745 ~ 1.672695) 正相關 | 0.001584 / 0.217720 / 0.640784 |
| Dabigatran etexilate | 1.391129 (1.165341 ~ 1.660665) 正相關 | 0.001007 / 0.138421 / 0.709857 |
| Cilostazol | 1.395556 (1.169077 ~ 1.665908) 正相關 | 0.001202 / 0.165205 / 0.684410 |
| Enoxaparin | 1.412236 (1.182906 ~ 1.686027) 正相關 | 0.001897 / 0.260740 / 0.609613 |

在二元型共變因模型中（附錄三），以「使用率」作為主要指標，先檢視各藥物在預測出血性中風患者中的相對風險比與 95% 信賴區間。從使用率可以看出，八種心血管用藥（Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin）對出血性中風患者的嚴重型精神疾病 HR 值介於 0.7364 ~ 0.7724，95% CI 範圍為 0.6185 ~ 0.9197，均未跨越 1，且 ANOVA 結果顯示 sum_sq/F/P 欄位值分別介於 0.0797 ~ 0.0976/11.0808 ~ 13.5538/0.0002 ~ 0.0009，均達高度顯著，顯示使用率與嚴重型精神疾病變因之間具有穩定且顯著的「反相關」關係。

在數值型共變因（使用次數）模型中，所有藥物 HR 值介於 1.3417 ~ 1.4230，95% CI 範圍為 1.1223 ~ 1.6988，顯示用藥次數增加與風險呈正向關係。然而，ANOVA 結果 sum_sq/F/P 欄位值介於 0.0004 ~ 0.0028/0.0537 ~ 0.3798/0.5377 ~ 0.8167，皆未達統計顯著水準，顯示儘管 HR 值呈現一致正相關趨勢，但使用次數在模型中的解釋力不足，無法作為顯著預測指標（附錄三）。

在以劑量（平均值、最大值、最小值、中位數）及用藥起訖時間（平均值、最大值、最小值、中位數）作為數值型共變因時，八種藥物 HR 範圍約為 1.3866 ~ 1.4227（劑量）與 1.3907 ~ 1.4176（時間），95% CI 大多未跨越 1，然 ANOVA 結果顯示 sum_sq/F/P 欄位值落在 0.0009 ~ 0.0030/0.0976 ~ 0.4101/0.5219 ~ 0.7547，顯示劑量與用藥時間雖對風險有一致的正向影響趨勢，但其統計解釋力仍然偏弱，並未在模型中展現出顯著預測能力（附錄三）。

綜合上述結果可見，僅「是否使用藥物」的二元共變因模型呈現穩定且顯著的保護性效應，而 ANOVA 結果也均達顯著；進一步細分至「使用次數」、「劑量統計量」與「用藥時間」等數值型共變因後，雖整體 HR 值皆呈現一致的正向趨勢，但 ANOVA 結果皆未達顯著水準，顯示其解釋風險能力有限。因此，在本研究中，「是否使用藥物」仍為預測嚴重型精神疾病患者後續出血性中風風險的主要且具統計顯著性的變因。

4.3 事件為缺血型中風對照組診斷前三診斷排除結果

本研究以缺血型中風對照組診斷前三診斷排除結果作為主要事件，將嚴重型精神疾病患者與非精神疾病患者進行比較分析，以評估其風險差異。

4.3.1 獨立性檢定

在本小節中，採用多種統計方法檢驗案例組與對照組在患者基本資訊與共病分布上的差異，以便清楚呈現各項檢定結果。

在進行獨立性檢定時，首先針對年齡這一連續變數，同時使用 t 檢定、U 檢定與 KS 檢定，評估兩組樣本在平均值、中位數及整體分布上的差異。表 4.3 年齡獨立檢定，呈現了年齡詳細統計量與 P 值結果：

表 4.3 年齡獨立檢定

| 年齡 | 案例組 (N=16,787) | 對照組 (N=90,716) | 統計量 | P 值 |
|--------------|----------------------|----------------------|----------------------|----------|
| 平均值 (標準差) | 54.4308 (19.1803) | 55.6653 (19.9131) | t = -7.4206 | < 0.0001 |
| | | | U = 730,937,332.5000 | < 0.0001 |
| | | | D = 0.0501 | < 0.0001 |

從上表可見，t 檢定的 t 值為 -7.4206 ($P < 0.0001$)，顯示案例組與對照組平均年齡差異高度顯著；U 檢定的 U 值為 730,937,332.5000 ($P < 0.0001$)，KS 檢定的 D 值為 0.0501 ($P < 0.0001$)。三種方法均一致指出兩組在年齡分布上存在顯著差異，表明在後續的多變量生存分析中，需將年齡納入模型作為重要協變量。

接著，在性別、事件率與各項共病指標上，採用卡方檢定並輔以 Fisher 精確檢定來檢驗二元類別變數的獨立性。下表 4.3 性別、事件、各項共病（高血壓、心臟類型疾病、神經類型疾病、糖尿病、高血脂）獨立檢定，呈現了案例組與對照組間的比較結果：

表 4.3 性別、事件、各項共病獨立檢定

| 分類 | 案例組 (N=16,787) | 對照組 (N=90,716) | 統計量 | P 值 |
|------------|---------------------|----------------------|-------------------------|----------|
| 性別 | 9,991 (女性：59.5%) | 49,317 (女性：54.4%) | $\chi^2 =$ 152.0319 | < 0.0001 |
| | 6,796 (男性：40.5%) | 41,399 (男性：45.6%) | odds ratio = 0.8103 | < 0.0001 |
| 事件 | 469 (2.8%) | 1,566 (1.7%) | $\chi^2 =$ 86.9318 | < 0.0001 |
| | | | odds ratio = 1.6362 | < 0.0001 |
| 高血壓 | 9,571 (57.0%) | 42,233 (46.6%) | $\chi^2 =$ 620.6712 | < 0.0001 |
| | | | odds ratio = 1.5226 | < 0.0001 |
| 心臟類型 疾病 | 6,862 (40.9%) | 30,131 (33.2%) | $\chi^2 =$ 368.4823 | < 0.0001 |
| | | | odds ratio = 1.3902 | < 0.0001 |
| 神經類型 疾病 | 4,957 (29.5%) | 10,168 (11.2%) | $\chi^2 =$ 3932.5460 | < 0.0001 |
| | | | odds ratio = 3.3194 | < 0.0001 |
| 糖尿病 | 4,372 (26.0%) | 17,233 (19.0%) | $\chi^2 =$ 438.1143 | < 0.0001 |
| | | | odds ratio = 1.5016 | < 0.0001 |
| 高血脂 | 7,111 (42.4%) | 29,879 (32.9%) | $\chi^2 =$ 557.3529 | < 0.0001 |
| | | | odds ratio = 1.4964 | < 0.0001 |

如上表所示，性別分布在檢定中達到高度顯著 ($\chi^2 = 152.0319$, $P < 0.0001$; $OR = 0.8103$, $P < 0.0001$)，案例組女性比例為 59.5%，高於對照組之 54.4%。在事件發生率方面，案例組為 2.8%，對照組為 1.7%，檢定結果 $\chi^2 = 86.9318$ ($P < 0.0001$)， $OR = 1.6362$ ($P < 0.0001$)，同樣顯示統計學上之顯著差異。

各項共病之獨立性檢定結果顯示，高血壓於案例組為 57.0%、對照組為 46.6% ($\chi^2 = 620.6712$, OR = 1.5226, P < 0.0001)；心臟類型疾病於案例組為 40.9%、對照組為 33.2% ($\chi^2 = 368.4823$, OR = 1.3902, P < 0.0001)；神經類型疾病於案例組為 29.5%、對照組為 11.2% ($\chi^2 = 3932.5460$, OR = 3.3194, P < 0.0001)；糖尿病於案例組為 26.0%、對照組為 19.0% ($\chi^2 = 438.1143$, OR = 1.5016, P < 0.0001)；高血脂於案例組為 42.4%、對照組為 32.9% ($\chi^2 = 557.3529$, OR = 1.4964, P < 0.0001)。

綜合上述獨立性檢定結果，可見案例組與對照組在性別分布、事件發生率及主要共病分布上均呈現顯著差異，為後續生存分析與比例風險模型中協變數的納入提供了堅實的實證基礎。

4.3.2 藥物獨立性檢定

在針對缺血型中風對照組診斷前三診斷排除結果事件的分析中，將進一步檢驗案例組與對照組在藥物使用情形上的差異，其中包含藥物使用率、劑量、使用次數與用藥起訖時間等多重指標的獨立性檢定。為了全面掌握這些變數的差異，各項指標將對應到各自的檢定如 t 檢定、U 檢定、KS 檢定、卡方檢定及 Fisher 精確檢定，以評估兩組樣本在使用率、平均值、標準差及整體分布上的顯著性差異，而關於表中設定的詳細說明，這裡將以下表舉例說明，主要能分成三個區域來看。

第一個區域是分類欄位中的使用率，意思是將案例組與對照組有使用藥物和沒有使用藥物的人（表中欄位顯示的是有使用藥物的人數），使用卡方檢定及 Fisher 精確檢定來觀察當中的統計量與 P 值。

第二個區域是分類欄位中的中位數、使用次數、最大值、平均值、最小值，意思是將案例組與對照組每位使用該藥物的人，針對該藥物的使用劑量（藥物劑量單位為毫克），使用 t 檢定、U 檢定、KS 檢定來觀察當中的統計量與 P 值。

第三個區域是分類欄位中的起訖時間平均值、起訖時間最大值、起訖時間最小值、起訖時間中位數、起訖時間最小值，意思是將案例組與對照組每位有使用該藥物的人，針對該藥物的使用起訖時間（藥物起訖時間單位為小時），使用 t 檢定、U 檢定、KS 檢定來觀察當中的統計量與 P 值，以下表 4.3 用藥獨立檢定，分別呈現八種心血管用藥的各項檢定結果：

表 4.3 每人 Aspirin 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,716) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 24,616 (27.1%) | 5,507 (32.8%) | $\chi^2 = 225.7892$ | < 0.0001 |
| | | | odds ratio = 1.3110 | < 0.0001 |
| 中位數 | 146.1933 (104.3453) | 127.4989 (92.0409) | t = -12.2701 | < 0.0001 |
| | | | U = 61,910,661.5000 | < 0.0001 |
| | | | D = 0.0859 | < 0.0001 |
| 使用次數 | 2.3626 (2.1638) | 3.5466 (4.2586) | t = 29.7224 | < 0.0001 |
| | | | U = 82,123,447.5000 | < 0.0001 |
| | | | D = 0.1681 | < 0.0001 |
| 最大值 | 178.9381 (121.6145) | 166.6351 (119.7952) | t = -6.8050 | < 0.0001 |
| | | | U = 63,913,252.5000 | < 0.0001 |
| | | | D = 0.0611 | < 0.0001 |
| 平均值 | 150.3983 (99.3887) | 132.7041 (86.7349) | t = -12.2121 | < 0.0001 |
| | | | U = 62,577,056.0000 | < 0.0001 |
| | | | D = 0.0851 | < 0.0001 |
| 最小值 | 130.1932 (98.8888) | 111.6904 (81.4301) | t = -12.9383 | < 0.0001 |
| | | | U = 62,492,212.5000 | < 0.0001 |
| | | | D = 0.0798 | < 0.0001 |
| 起訖時間 平均值 | 65.1993 (65.7459) | 96.8271 (111.9593) | t = 27.8027 | < 0.0001 |
| | | | U = 83,961,698.0000 | < 0.0001 |
| | | | D = 0.1982 | < 0.0001 |
| 起訖時間 最大值 | 97.4331 (106.6167) | 172.8092 (234.0323) | t = 36.3964 | < 0.0001 |
| | | | U = 86,473,060.0000 | < 0.0001 |
| | | | D = 0.2274 | < 0.0001 |
| 起訖時間 最小值 | 42.1642 (61.8763) | 49.2085 (88.0875) | t = 7.0077 | < 0.0001 |
| | | | U = 67,971,020.0000 | 0.7435 |
| | | | D = 0.0448 | < 0.0001 |
| 起訖時間 中位數 | 60.8446 (64.9777) | 86.5191 (102.3838) | t = 23.5112 | < 0.0001 |
| | | | U = 81,615,780.5000 | < 0.0001 |
| | | | D = 0.1695 | < 0.0001 |

表 4.3 每人 Warfarin 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立
檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,716) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 7,540 (8.3%) | 1,542 (9.2%) | $\chi^2 = 13.9912$ | 0.0002 |
| | | | odds ratio = 1.1158 | 0.0002 |
| 中位數 | 3.9796 (1.8039) | 3.9278 (2.0764) | t = -1.0006 | 0.3170 |
| | | | U = 5,629,778.0000 | 0.0458 |
| | | | D = 0.0440 | 0.0136 |
| 使用次數 | 5.2241 (6.6202) | 12.6213 (20.4933) | t = 25.5073 | < 0.0001 |
| | | | U = 7,882,814.5000 | < 0.0001 |
| | | | D = 0.2753 | < 0.0001 |
| 最大值 | 5.1391 (2.2907) | 5.8437 (3.1640) | t = 10.2450 | < 0.0001 |
| | | | U = 6,577,207.5000 | < 0.0001 |
| | | | D = 0.1218 | < 0.0001 |
| 平均值 | 3.9814 (1.7061) | 3.9409 (1.9346) | t = -0.8295 | 0.4068 |
| | | | U = 5,644,807.0000 | 0.0715 |
| | | | D = 0.0745 | < 0.0001 |
| 最小值 | 2.8966 (1.8313) | 2.2748 (1.6458) | t = -12.3511 | < 0.0001 |
| | | | U = 4,574,608.5000 | < 0.0001 |
| | | | D = 0.1600 | < 0.0001 |
| 起訖時間 平均值 | 26.8397 (20.0431) | 28.6498 (19.3418) | t = 3.2504 | 0.0012 |
| | | | U = 6,453,817.5000 | < 0.0001 |
| | | | D = 0.1142 | < 0.0001 |
| 起訖時間 最大值 | 45.8340 (39.1648) | 67.4650 (64.9264) | t = 17.3540 | < 0.0001 |
| | | | U = 7,376,557.0000 | < 0.0001 |
| | | | D = 0.1988 | < 0.0001 |
| 起訖時間 最小值 | 13.4637 (19.6626) | 9.4358 (15.2882) | t = -7.5885 | < 0.0001 |
| | | | U = 4,660,248.0000 | < 0.0001 |
| | | | D = 0.1527 | < 0.0001 |
| 起訖時間 中位數 | 25.7035 (19.6748) | 25.7575 (17.6162) | t = 0.0998 | 0.9205 |
| | | | U = 6,030,891.5000 | 0.0195 |
| | | | D = 0.0915 | < 0.0001 |

表 4.3 每人 Clopidogrel 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,716) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 5,799 (6.4%) | 1,254 (7.5%) | $\chi^2 = 26.8324$ | < 0.0001 |
| | | | odds ratio = 1.1822 | < 0.0001 |
| 中位數 | 94.9791 (69.6337) | 88.3164 (54.9430) | t = -3.1809 | 0.0015 |
| | | | U = 3,533,901.5000 | 0.0027 |
| | | | D = 0.0266 | 0.4487 |
| 使用次數 | 2.0955 (1.8607) | 3.3349 (3.6012) | t = 17.5342 | < 0.0001 |
| | | | U = 4,645,175.0000 | < 0.0001 |
| | | | D = 0.2154 | < 0.0001 |
| 最大值 | 134.8487 (139.1042) | 130.0239 (127.6385) | t = -1.1297 | 0.2586 |
| | | | U = 3,625,630.5000 | 0.8173 |
| | | | D = 0.0162 | 0.9444 |
| 平均值 | 101.7198 (71.0719) | 95.9527 (57.4709) | t = -2.6896 | 0.0072 |
| | | | U = 3,605,255.0000 | 0.4942 |
| | | | D = 0.0336 | 0.1906 |
| 最小值 | 80.1345 (45.8864) | 78.4390 (35.8075) | t = -1.2300 | 0.2188 |
| | | | U = 3,620,963.0000 | 0.2953 |
| | | | D = 0.0037 | > 0.9900 |
| 起訖時間 平均值 | 54.6169 (68.1427) | 75.5126 (83.3676) | t = 9.4386 | < 0.0001 |
| | | | U = 4,323,919.5000 | < 0.0001 |
| | | | D = 0.1698 | < 0.0001 |
| 起訖時間 最大值 | 78.0819 (113.0654) | 135.4083 (170.8412) | t = 14.6913 | < 0.0001 |
| | | | U = 4,580,424.5000 | < 0.0001 |
| | | | D = 0.2132 | < 0.0001 |
| 起訖時間 最小值 | 37.2331 (52.4676) | 37.2305 (63.8274) | t = -0.0016 | > 0.9900 |
| | | | U = 3,365,104.0000 | < 0.0001 |
| | | | D = 0.1006 | < 0.0001 |
| 起訖時間 中位數 | 51.5493 (67.6811) | 67.3904 (79.7808) | t = 7.2681 | < 0.0001 |
| | | | U = 4,174,735.0000 | < 0.0001 |
| | | | D = 0.1466 | < 0.0001 |

表 4.3 每人 Apixaban 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立
檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,716) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 1,746 (1.9%) | 865 (5.2%) | $\chi^2 = 622.9091$ | < 0.0001 |
| | | | odds ratio = 2.7683 | < 0.0001 |
| 中位數 | 5.0294 (2.0714) | 4.8497 (1.8738) | t = -2.1515 | 0.0315 |
| | | | U = 731,229.0000 | 0.1286 |
| | | | D = 0.0328 | 0.5476 |
| 使用次數 | 1.9290 (1.6160) | 3.1480 (3.2764) | t = 12.7327 | < 0.0001 |
| | | | U = 963,856.5000 | < 0.0001 |
| | | | D = 0.2138 | < 0.0001 |
| 最大值 | 5.3021 (2.2596) | 5.2861 (2.2108) | t = -0.1714 | 0.8639 |
| | | | U = 755,863.0000 | 0.9627 |
| | | | D = 0.0080 | > 0.9900 |
| 平均值 | 5.0303 (2.0297) | 4.8548 (1.8082) | t = -2.1537 | 0.0314 |
| | | | U = 727,045.5000 | 0.0874 |
| | | | D = 0.0413 | 0.2671 |
| 最小值 | 4.7659 (2.0303) | 4.4408 (1.8181) | t = -3.9844 | < 0.0001 |
| | | | U = 696,716.0000 | 0.0002 |
| | | | D = 0.0564 | 0.0481 |
| 起訖時間 平均值 | 50.5499 (51.2228) | 66.2388 (62.7015) | t = 6.8247 | < 0.0001 |
| | | | U = 910,815.5000 | < 0.0001 |
| | | | D = 0.1715 | < 0.0001 |
| 起訖時間 最大值 | 70.1850 (74.4328) | 115.0728 (129.8100) | t = 11.2033 | < 0.0001 |
| | | | U = 953,635.5000 | < 0.0001 |
| | | | D = 0.2042 | < 0.0001 |
| 起訖時間 最小值 | 35.9685 (48.9591) | 33.3549 (48.0396) | t = -1.2919 | 0.1965 |
| | | | U = 719,418.0000 | 0.0486 |
| | | | D = 0.0632 | 0.0185 |
| 起訖時間 中位數 | 48.0106 (50.7092) | 59.8566 (59.3536) | t = 5.3029 | < 0.0001 |
| | | | U = 881,110.5000 | < 0.0001 |
| | | | D = 0.1460 | < 0.0001 |

表 4.3 每人 Rivaroxaban 用藥劑量（單位：毫克） 、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,716) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 1,147 (1.3%) | 473 (2.8%) | $\chi^2 = 230.2665$ | < 0.0001 |
| | | | odds ratio = 2.2641 | < 0.0001 |
| 中位數 | 17.7779 (2.9494) | 17.8858 (3.0133) | t = 0.6655 | 0.5058 |
| | | | U = 278,838.0000 | 0.3106 |
| | | | D = 0.0349 | 0.7931 |
| 使用次數 | 1.7393 (1.4238) | 2.8647 (3.1901) | t = 9.8131 | < 0.0001 |
| | | | U = 349,002.5000 | < 0.0001 |
| | | | D = 0.2403 | < 0.0001 |
| 最大值 | 18.0471 (2.8944) | 18.3562 (2.8479) | t = 1.9638 | 0.0497 |
| | | | U = 288,204.0000 | 0.0159 |
| | | | D = 0.0676 | 0.0890 |
| 平均值 | 17.7563 (2.8819) | 17.8453 (2.8400) | t = 0.5673 | 0.5706 |
| | | | U = 272,163.5000 | 0.9078 |
| | | | D = 0.0615 | 0.1513 |
| 最小值 | 17.4194 (3.1434) | 17.1934 (3.2484) | t = -1.3023 | 0.1930 |
| | | | U = 261,899.5000 | 0.2153 |
| | | | D = 0.0266 | 0.9659 |
| 起訖時間 平均值 | 39.2530 (44.3934) | 66.1971 (70.8681) | t = 9.2185 | < 0.0001 |
| | | | U = 358,827.5000 | < 0.0001 |
| | | | D = 0.2762 | < 0.0001 |
| 起訖時間 最大值 | 53.5510 (74.3070) | 108.1966 (126.2901) | t = 10.8065 | < 0.0001 |
| | | | U = 372,296.5000 | < 0.0001 |
| | | | D = 0.2956 | < 0.0001 |
| 起訖時間 最小值 | 28.0410 (38.6420) | 38.0486 (62.2191) | t = 3.9163 | < 0.0001 |
| | | | U = 290,739.5000 | 0.0228 |
| | | | D = 0.0993 | 0.0025 |
| 起訖時間 中位數 | 37.5863 (43.7822) | 60.5973 (69.2531) | t = 8.0203 | < 0.0001 |
| | | | U = 348,226.5000 | < 0.0001 |
| | | | D = 0.2266 | < 0.0001 |

表 4.3 每人 Dabigatran etexilate 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,716) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 368 (0.4%) | 81 (0.5%) | $\chi^2 = 2.0117$ | 0.1561 |
| | | | odds ratio = 1.1904 | 0.1709 |
| 中位數 | 140.0000 (24.7687) | 140.7407 (24.1073) | t = 0.2448 | 0.8067 |
| | | | U = 15,068.0000 | 0.8001 |
| | | | D = 0.0139 | > 0.9900 |
| 使用次數 | 1.8859 (1.3823) | 2.7901 (2.7464) | t = 4.3126 | < 0.0001 |
| | | | U = 18,270.5000 | 0.0005 |
| | | | D = 0.1716 | 0.0348 |
| 最大值 | 141.6304 (23.4853) | 143.5185 (21.2050) | t = 0.6661 | 0.5057 |
| | | | U = 15,310.0000 | 0.4777 |
| | | | D = 0.0277 | > 0.9900 |
| 平均值 | 139.5521 (24.3263) | 141.1616 (22.6520) | t = 0.5456 | 0.5856 |
| | | | U = 15,292.5000 | 0.5737 |
| | | | D = 0.0354 | > 0.9900 |
| 最小值 | 137.1467 (28.1662) | 138.8889 (26.8095) | t = 0.5083 | 0.6115 |
| | | | U = 15,276.0000 | 0.5887 |
| | | | D = 0.0258 | > 0.9900 |
| 起訖時間 平均值 | 39.8799 (36.5874) | 58.2259 (48.4849) | t = 3.8344 | 0.0001 |
| | | | U = 18,963.5000 | 0.0001 |
| | | | D = 0.2465 | 0.0005 |
| 起訖時間 最大值 | 55.2935 (56.5873) | 92.6173 (78.4963) | t = 4.9782 | < 0.0001 |
| | | | U = 19,883.5000 | < 0.0001 |
| | | | D = 0.2463 | 0.0005 |
| 起訖時間 最小值 | 28.2745 (35.2309) | 35.6543 (47.6543) | t = 1.5926 | 0.1120 |
| | | | U = 15,704.5000 | 0.4487 |
| | | | D = 0.1087 | 0.3810 |
| 起訖時間 中位數 | 37.7649 (36.2200) | 52.6235 (48.3525) | t = 3.1306 | 0.0019 |
| | | | U = 18,000.5000 | 0.0034 |
| | | | D = 0.1822 | 0.0209 |

表 4.3 每人 Cilostazol 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立
檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,716) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 116 (0.1%) | 73 (0.4%) | $\chi^2 = 76.0684$ | < 0.0001 |
| | | | odds ratio = 3.4112 | < 0.0001 |
| 中位數 | 88.1466 (21.4834) | 85.2740 (23.1374) | t = -0.8687 | 0.3861 |
| | | | U = 3,981.5000 | 0.3762 |
| | | | D = 0.0737 | 0.9479 |
| 使用次數 | 1.9397 (1.6955) | 3.0959 (4.6133) | t = 2.4521 | 0.0151 |
| | | | U = 4,942.5000 | 0.0369 |
| | | | D = 0.1408 | 0.3008 |
| 最大值 | 90.7328 (19.9265) | 86.9863 (23.6106) | t = -1.1707 | 0.2432 |
| | | | U = 3,898.0000 | 0.2039 |
| | | | D = 0.0929 | 0.7903 |
| 平均值 | 88.3850 (20.6955) | 85.4504 (22.7669) | t = -0.9129 | 0.3625 |
| | | | U = 3,950.0000 | 0.3309 |
| | | | D = 0.0929 | 0.7903 |
| 最小值 | 86.8534 (22.4725) | 83.5616 (23.6508) | t = -0.9608 | 0.3379 |
| | | | U = 3,949.0000 | 0.3212 |
| | | | D = 0.0701 | 0.9648 |
| 起訖時間 平均值 | 72.3455 (58.7168) | 99.7072 (113.7005) | t = 2.1739 | 0.0310 |
| | | | U = 4,889.5000 | 0.0736 |
| | | | D = 0.1788 | 0.0981 |
| 起訖時間 最大值 | 98.6638 (85.4134) | 158.8219 (205.8570) | t = 2.7919 | 0.0058 |
| | | | U = 4,931.0000 | 0.0571 |
| | | | D = 0.1621 | 0.1653 |
| 起訖時間 最小值 | 51.6897 (55.7888) | 65.0822 (109.3609) | t = 1.1103 | 0.2683 |
| | | | U = 4,491.0000 | 0.4833 |
| | | | D = 0.0997 | 0.7168 |
| 起訖時間 中位數 | 69.5474 (59.4862) | 93.0411 (108.9363) | t = 1.9147 | 0.0571 |
| | | | U = 4,964.5000 | 0.0462 |
| | | | D = 0.2117 | 0.0299 |

表 4.3 每人 Enoxaparin 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=16,787) 平均值 (標準差) | 對照組 (N=90,716) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 10,042 (11.1%) | 2,916 (17.4%) | $\chi^2 = 530.5208$ | < 0.0001 |
| | | | odds ratio = 1.6889 | < 0.0001 |
| 中位數 | 52.1012 (24.1971) | 54.5991 (25.3508) | t = 4.8544 | < 0.0001 |
| | | | U = 15,651,829.0000 | < 0.0001 |
| | | | D = 0.0537 | < 0.0001 |
| 使用次數 | 1.7733 (1.6473) | 2.5223 (2.9144) | t = 17.7724 | < 0.0001 |
| | | | U = 17,327,058.0000 | < 0.0001 |
| | | | D = 0.1504 | < 0.0001 |
| 最大值 | 54.2539 (25.9917) | 58.2133 (28.3148) | t = 7.0940 | < 0.0001 |
| | | | U = 15,880,027.0000 | < 0.0001 |
| | | | D = 0.0654 | < 0.0001 |
| 平均值 | 52.0425 (23.8384) | 54.4076 (24.7364) | t = 4.6762 | < 0.0001 |
| | | | U = 15,596,354.0000 | < 0.0001 |
| | | | D = 0.0648 | < 0.0001 |
| 最小值 | 49.7242 (23.3573) | 50.2929 (24.0047) | t = 1.1502 | 0.2501 |
| | | | U = 14,821,490.0000 | 0.2728 |
| | | | D = 0.0110 | 0.9438 |
| 起訖時間 平均值 | 56.1983 (51.5079) | 71.2425 (73.6164) | t = 12.4960 | < 0.0001 |
| | | | U = 16,437,802.5000 | < 0.0001 |
| | | | D = 0.0881 | < 0.0001 |
| 起訖時間 最大值 | 71.7462 (75.2904) | 112.3354 (257.0982) | t = 13.9014 | < 0.0001 |
| | | | U = 17,444,103.0000 | < 0.0001 |
| | | | D = 0.1652 | < 0.0001 |
| 起訖時間 最小值 | 44.4869 (51.2121) | 46.9122 (67.9764) | t = 2.0801 | 0.0375 |
| | | | U = 13,863,400.0000 | < 0.0001 |
| | | | D = 0.0676 | < 0.0001 |
| 起訖時間 中位數 | 54.5996 (51.1828) | 66.3265 (70.2718) | t = 9.9463 | < 0.0001 |
| | | | U = 15,866,820.0000 | < 0.0001 |
| | | | D = 0.0684 | < 0.0001 |

在 Aspirin 使用情形中，案例組 24,616 人 (27.1%) 使用，而對照組 5,507 人 (32.8%) 使用，差異高度顯著 ($\chi^2 = 225.7892$, $P < 0.0001$; odds ratio = 1.3110, $P < 0.0001$)。用藥劑量中位數在案例組為 146.1933 毫克 (104.3453)，明顯高於對照組 127.4989 毫克 (92.0409) ($t = -12.2701$, $P < 0.0001$; $U = 61,910,661.5000$, $P < 0.0001$; $D = 0.0859$, $P < 0.0001$)。使用次數 (案例組 2.3626 次 vs. 對照組 3.5466 次) 顯著較低 ($t = 29.7224$, $P < 0.0001$; $U = 82,123,447.5000$, $P < 0.0001$; $D = 0.1681$, $P < 0.0001$)，但最大劑量 (178.9381 vs. 166.6351, $t = -6.8050$, $P < 0.0001$)、平均劑量 (150.3983 vs. 132.7041, $t = -12.2121$, $P < 0.0001$)、最小劑量 (130.1932 vs. 111.6904, $t = -12.9383$, $P < 0.0001$) 均顯著較高。起訖時間平均值在案例組顯著較低 (65.1993 h vs. 96.8271 h, $t = 27.8027$, $P < 0.0001$; $U = 83,961,698.0000$, $P < 0.0001$; $D = 0.1982$, $P < 0.0001$)，而最大起訖時間 (97.4331 vs. 172.8092, $t = 36.3964$, $P < 0.0001$)、最小起訖時間 (42.1642 vs. 49.2085, $t = 7.0077$, $P < 0.0001$; $U = 67,971,020.0000$, $P = 0.7435$; $D = 0.0448$, $P < 0.0001$) 及中位起訖時間 (60.8446 vs. 86.5191, $t = 23.5112$, $P < 0.0001$; $U = 81,615,780.5000$, $P < 0.0001$; $D = 0.1695$, $P < 0.0001$) 均達高度顯著，顯示案例組用藥時間分布較為集中。

在 Warfarin 使用情形中，案例組 7,540 人 (8.3%) 使用，對照組 1,542 人 (9.2%) 使用，差異顯著 ($\chi^2 = 13.9912$, $P = 0.0002$; odds ratio = 1.1158, $P = 0.0002$)。用藥劑量中位數 (3.9796 vs. 3.9278) 與平均劑量 (3.9814 vs. 3.9409) 均未達顯著 ($t = -1.0006$, $P = 0.3170$; $t = -0.8295$, $P = 0.4068$)，但使用次數 (5.2241 次 vs. 12.6213 次) 在對照組顯著較高 ($t = 25.5073$, $P < 0.0001$; $U = 7,882,814.5000$, $P < 0.0001$; $D = 0.2753$, $P < 0.0001$)，最大劑量 (5.1391 vs. 5.8437) 亦顯著較低 ($t = 10.2450$, $P < 0.0001$; $U = 6,577,207.5000$, $P < 0.0001$; $D = 0.1218$, $P < 0.0001$)。起訖時間平均值 (26.8397 h vs. 28.6498 h, $t = 3.2504$, $P = 0.0012$; $U = 6,453,817.5000$, $P < 0.0001$; $D = 0.1142$, $P < 0.0001$) 及最大起訖時間 (45.8340 vs. 67.4650, $t = 17.3540$, $P < 0.0001$; $U = 7,376,557.0000$, $P < 0.0001$; $D = 0.1988$, $P < 0.0001$) 均顯著差異，而最小起訖時間 (13.4637 vs. 9.4358, $t = -7.5885$, $P < 0.0001$; $U = 4,660,248.0000$, $P < 0.0001$; $D = 0.1527$, $P < 0.0001$) 顯示案例組時間更分散。

在 Clopidogrel 使用情形中，案例組 5,799 人 (6.4%) 使用，對照組 1,254 人 (7.5%) 使用，差異顯著 ($\chi^2 = 26.8324$, $P < 0.0001$; odds ratio = 1.1822, $P < 0.0001$)。用藥劑量中位數在案例組為 94.9791 毫克 (69.6337)，略高於對照組 88.3164 毫克 (54.9430) ($t = -3.1809$, $P = 0.0015$; $U = 3,533,901.5000$, $P = 0.0027$; $D = 0.0266$, $P = 0.4487$)。使用次數 (2.0955 次 vs. 3.3349 次) 顯著較低 ($t = 17.5342$, $P < 0.0001$; $U = 4,645,175.0000$, $P < 0.0001$; $D = 0.2154$, $P < 0.0001$)。起訖時間平均值 (54.6169 h vs. 75.5126 h, $t = 9.4386$, $P < 0.0001$; $U = 4,323,919.5000$, $P < 0.0001$; $D = 0.1698$, $P < 0.0001$)、最大起訖時間 (78.0819

vs. 135.4083, $t = 14.6913$, $P < 0.0001$; $U = 4,580,424.5000$, $P < 0.0001$; $D = 0.2132$, $P < 0.0001$) 及中位起訖時間 (51.5493 vs. 67.3904, $t = 7.2681$, $P < 0.0001$; $U = 4,174,735.0000$, $P < 0.0001$; $D = 0.1466$, $P < 0.0001$) 皆達高度顯著。

在 Apixaban 使用情形中，案例組 1,746 人 (1.9%) 使用，對照組 865 人 (5.2%) 使用，差異高度顯著 ($\chi^2 = 622.9091$, $P < 0.0001$; odds ratio = 2.7683, $P < 0.0001$)。用藥劑量中位數 (5.0294 vs. 4.8497) 輕微差異 ($t = -2.1515$, $P = 0.0315$; $U = 731,229.0000$, $P = 0.1286$; $D = 0.0328$, $P = 0.5476$)。使用次數 (1.9290 次 vs. 3.1480 次) 顯著較低 ($t = 12.7327$, $P < 0.0001$; $U = 963,856.5000$, $P < 0.0001$; $D = 0.2138$, $P < 0.0001$)。起訖時間平均值 (50.5499 h vs. 66.2388 h, $t = 6.8247$, $P < 0.0001$; $U = 910,815.5000$, $P < 0.0001$; $D = 0.1715$, $P < 0.0001$)、最大起訖時間 (70.1850 vs. 115.0728, $t = 11.2033$, $P < 0.0001$; $U = 953,635.5000$, $P < 0.0001$; $D = 0.2042$, $P < 0.0001$) 及中位起訖時間 (48.0106 vs. 59.8566, $t = 5.3029$, $P < 0.0001$; $U = 881,110.5000$, $P < 0.0001$; $D = 0.1460$, $P < 0.0001$) 均達顯著。

在 Rivaroxaban 使用情形中，案例組 1,147 人 (1.3%) 使用，對照組 473 人 (2.8%) 使用，差異顯著 ($\chi^2 = 230.2665$, $P < 0.0001$; odds ratio = 2.2641, $P < 0.0001$)。用藥劑量中位數 (17.7779 vs. 17.8858) 與平均劑量 (17.7563 vs. 17.8453) 均無顯著差異。使用次數 (1.7393 次 vs. 2.8647 次) 顯著較低 ($t = 9.8131$, $P < 0.0001$; $U = 349,002.5000$, $P < 0.0001$; $D = 0.2403$, $P < 0.0001$)。起訖時間平均值 (39.2530 h vs. 66.1971 h, $t = 9.2185$, $P < 0.0001$; $U = 358,827.5000$, $P < 0.0001$; $D = 0.2762$, $P < 0.0001$)、最大起訖時間 (53.5510 vs. 108.1966, $t = 10.8065$, $P < 0.0001$; $U = 372,296.5000$, $P < 0.0001$; $D = 0.2956$, $P < 0.0001$)、最小起訖時間 (28.0410 vs. 38.0486, $t = 3.9163$, $P < 0.0001$; $U = 290,739.5000$, $P = 0.0228$; $D = 0.0993$, $P = 0.0025$) 及中位起訖時間 (37.5863 vs. 60.5973, $t = 8.0203$, $P < 0.0001$; $U = 348,226.5000$, $P < 0.0001$; $D = 0.2266$, $P < 0.0001$) 均達顯著。

在 Dabigatran etexilate 使用情形中，案例組 368 人 (0.4%) 使用，對照組 81 人 (0.5%) 使用，差異無顯著 ($\chi^2 = 2.0117$, $P = 0.1561$; odds ratio = 1.1904, $P = 0.1709$)。用藥劑量中位數 (140.0000 vs. 140.7407) 與平均劑量 (139.5521 vs. 141.1616) 均無顯著差異，使用次數 (1.8859 次 vs. 2.7901 次) 顯著較低 ($t = 4.3126$, $P < 0.0001$; $U = 18,270.5000$, $P = 0.0005$; $D = 0.1716$, $P = 0.0348$)。起訖時間平均值 (39.8799 h vs. 58.2259 h, $t = 3.8344$, $P = 0.0001$; $U = 18,963.5000$, $P = 0.0001$; $D = 0.2465$, $P = 0.0005$)、最大起訖時間 (55.2935 vs. 92.6173, $t = 4.9784$, $P < 0.0001$; $U = 19,883.5000$, $P < 0.0001$; $D = 0.2463$, $P = 0.0005$) 及中位起訖時間 (37.7649 vs. 52.6235, $t = 3.1306$, $P = 0.0019$; $U = 18,000.5000$, $P = 0.0034$; $D = 0.1822$, $P = 0.0209$) 皆達顯著。

在 Cilostazol 使用情形中，案例組 116 人 (0.1%) 使用，對照組 73 人 (0.4%) 使用，差異顯著 ($\chi^2 = 76.0684$, $P < 0.0001$; odds ratio = 3.4112, $P < 0.0001$)。用藥劑量中位數 (88.1466 vs. 85.2740) 與平均劑量 (88.3850 vs. 85.4504) 均無顯

著差異，使用次數（1.9397 次 vs. 3.0959 次）顯著較低 ($t = 2.4521$, $P = 0.0151$; $U = 4,942.5000$, $P = 0.0369$; $D = 0.1408$, $P = 0.3008$)。起訖時間最大值 (98.6638 h vs. 158.8219 h, $t = 2.7919$, $P = 0.0058$) 及中位起訖時間 (69.5474 vs. 93.0411, $t = 1.9147$, $P = 0.0571$; $U = 4,964.5000$, $P = 0.0462$; $D = 0.2117$, $P = 0.0299$) 顯示案例組時間分布更集中。

在 Enoxaparin 使用情形中，案例組 10,042 人 (11.1%) 使用，對照組 2,916 人 (17.4%) 使用，差異顯著 ($\chi^2 = 530.5208$, $P < 0.0001$; odds ratio = 1.6889, $P < 0.0001$)。用藥劑量中位數 (52.1012 vs. 54.5991) 顯著較低 ($t = 4.8544$, $P < 0.0001$; $U = 15,651,829.0000$, $P < 0.0001$; $D = 0.0537$, $P < 0.0001$)，使用次數 (1.7733 次 vs. 2.5223 次) 亦顯著較低 ($t = 17.7724$, $P < 0.0001$; $U = 17,327,058.0000$, $P < 0.0001$; $D = 0.1504$, $P < 0.0001$)。起訖時間平均值 (56.1983 h vs. 71.2425 h, $t = 12.4960$, $P < 0.0001$; $U = 16,437,802.5000$, $P < 0.0001$; $D = 0.0881$, $P < 0.0001$)、最大起訖時間 (71.7462 vs. 112.3354, $t = 13.9014$, $P < 0.0001$; $U = 17,444,103.0000$, $P < 0.0001$; $D = 0.1652$, $P < 0.0001$) 及中位起訖時間 (54.5996 vs. 66.3265, $t = 9.9463$, $P < 0.0001$; $U = 15,866,820.0000$, $P < 0.0001$; $D = 0.0684$, $P < 0.0001$) 皆達高度顯著。

綜合上述結果可見，所有心血管用藥在案例組相較於對照組均呈現顯著的使用率與用藥次數差異，並在多數劑量及起訖時間指標上顯示顯著的離散度與延長或縮短趨勢，進一步支持嚴重型精神疾病患者在缺血性中風預防與管理中，心血管藥物的使用模式確實存在顯著差異。

4.3.3 生存分析結果

在生存分析結果中，採用 Kaplan-Meier 估計案例組與對照組之存活函數，將兩組存活曲線並置比較。其中 Kaplan-Meier 圖設定的藍色階梯線代表案例組 (case)，橙色階梯線代表對照組 (control)，則 95% 信賴區間以陰影區域標示，以天數為橫軸、累積存活率為縱軸，接著是解構對數秩檢定圖的設定，圖中是以針對每個時間點，分別計算卡方統計量與 P 值，以揭示兩組之間在不同時間段的顯著性差異，以天數為橫軸、卡方值為縱軸，如下圖 9 所示：

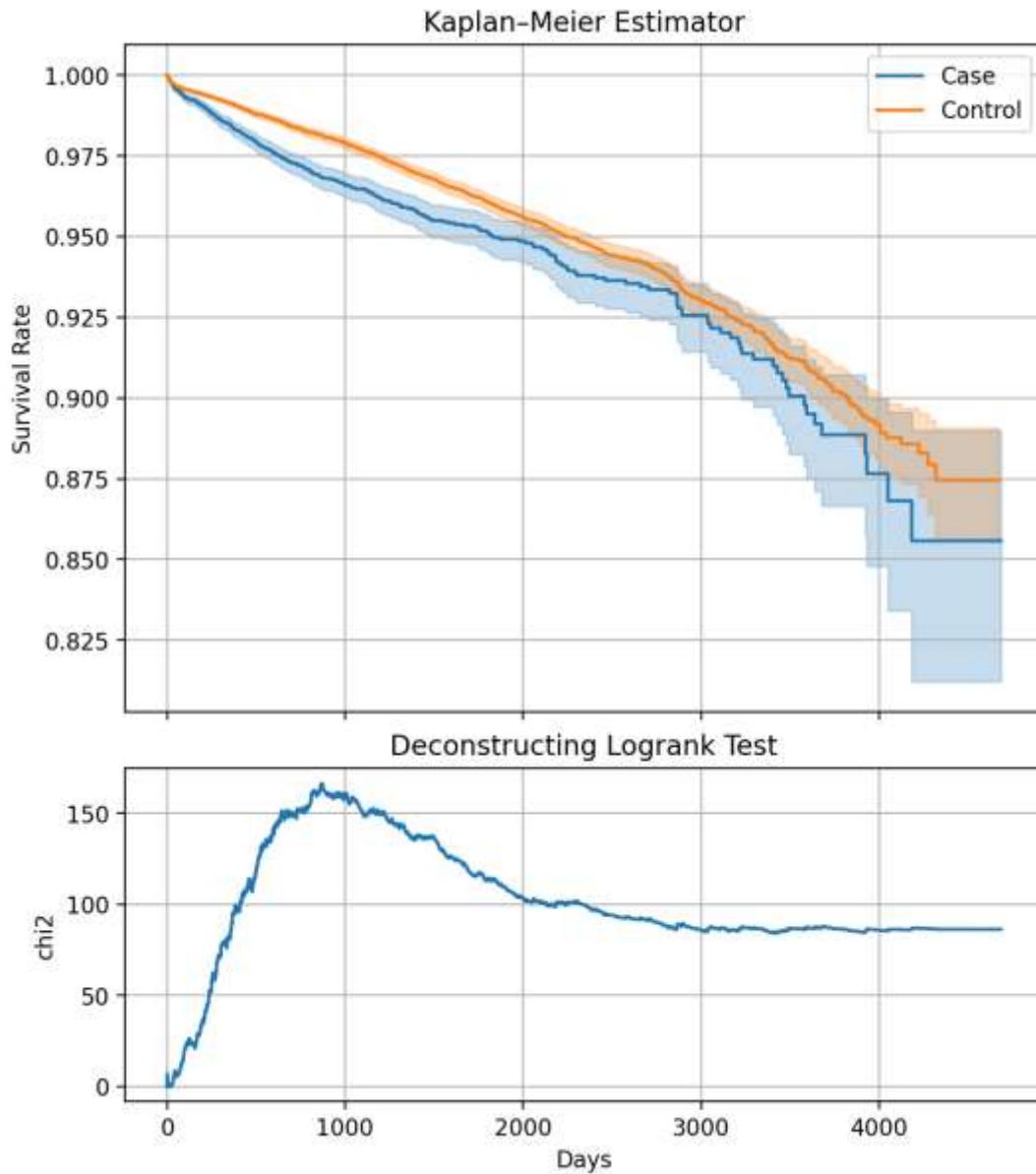


圖 9 案例組與對照組 Kaplan-Meier 存活曲線和解構對數秩檢定生存函數

從圖 9 上圖能發現對照組的生存率在初期與案例組重疊，但是來到大約 1000 天的時候，圖 9 的下圖中能發現卡方值正在開始往下降，這是因為案例組的生存率與卡方值的累計降了下來，所以案例組與對照組的生存曲線開始逐漸拉開，接著大概到了 1500 天之後，生存曲線開始逐漸接近，案例組的累計也變得更慢了，則對照組幾乎是一直維持固定斜率，此時的卡方值則繼續往下降，直到大概 2000 天之後，案例組下降的更緩慢並與對照組逐漸縮短距離，但計算卡方值的部分還是持續累計，這時的卡方值也下降的更緩慢，不過這些卡方值都有超過統計顯著。綜合上述來看，對照組累積數率沒有太大的變化，但案例組累計則是逐漸變得緩

慢，這表示案例組的危機事件都比較快發生，所以當累計開始變慢的時候，卡方值則開始往下降，這是因為對照組都沒有太大的變化所造成的結果。

接著，可以透過 Cox 比例風險模型所產生的危險比(Hazard Ratio)與 ANOVA 分析，深入探討二元與數值型共變因對缺血型中風對照組診斷前三診斷排除結果，事件發生風險的影響，並將 Cox 比例風險模型與 ANOVA 所產生的結果，以下圖 10 呈現：

| covariate | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq_bool | F_bool | PR(>F)_bool |
|--------------------------------|-----------|---------------------|---------------------|----------|-------------|------------|-------------|
| gender | 1.060041 | 0.969828 | 1.158645 | 0.198844 | 0.286631 | 15.882106 | < 0.0001 |
| age | 1.041540 | 1.037935 | 1.045159 | < 0.0001 | 0.971371 | 53.823300 | < 0.0001 |
| with_psychosis | 1.040793 | 0.933182 | 1.160812 | 0.472738 | 0.002799 | 0.155101 | 0.693708 |
| with_hypertension | 1.346617 | 1.168425 | 1.551983 | < 0.0001 | 0.565875 | 31.354955 | < 0.0001 |
| with_heart_type_disease | 1.683867 | 1.508032 | 1.880204 | < 0.0001 | 4.408153 | 244.254162 | < 0.0001 |
| with_neurological_type_disease | 2.953674 | 2.692064 | 3.240708 | < 0.0001 | 15.079671 | 835.559159 | < 0.0001 |
| with_diabetes | 1.177216 | 1.072333 | 1.292358 | 0.000611 | 0.654900 | 36.287788 | < 0.0001 |
| with_hyperlipidemia | 1.502100 | 1.345463 | 1.676973 | < 0.0001 | 4.449894 | 246.567043 | < 0.0001 |

| covariate | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq_time | F_time | PR(>F)_time |
|---------------------------------|-----------|---------------------|---------------------|----------|-------------|------------|-------------|
| gender | 1.184581 | 1.084576 | 1.293807 | 0.000167 | 0.044165 | 2.423035 | 0.119566 |
| age | 1.057843 | 1.054635 | 1.061060 | < 0.0001 | 10.265944 | 563.223825 | < 0.0001 |
| with_psychosis | 1.543328 | 1.385718 | 1.718866 | < 0.0001 | 0.252319 | 13.843051 | 0.000199 |
| hypertension_times | 0.952563 | 0.935477 | 0.969961 | < 0.0001 | 0.463700 | 25.440113 | < 0.0001 |
| heart_type_disease_times | 1.009444 | 1.003728 | 1.015192 | 0.001177 | 2.356385 | 129.279124 | < 0.0001 |
| neurological_type_disease_times | 1.036910 | 1.025528 | 1.048419 | < 0.0001 | 1.025127 | 56.241854 | < 0.0001 |
| diabetes_times | 1.009339 | 1.000293 | 1.018466 | 0.043001 | 0.309443 | 16.977081 | < 0.0001 |
| hyperlipidemia_times | 1.009316 | 0.987886 | 1.031211 | 0.397062 | 1.399052 | 76.756641 | < 0.0001 |

圖 10 二元與數值型共變因的風險比網頁結果

在二元共變因模型中，年齡每增加一歲，風險顯著提升 ($HR = 1.0415$, 95% CI : $1.0379 \sim 1.0452$, $p < 0.0001$)，性別影響不顯著 ($HR = 1.0600$, 95% CI : $0.9698 \sim 1.1586$, $p = 0.1988$)。患有嚴重型精神疾病者風險亦無顯著差異 ($HR = 1.0408$, 95% CI : $0.9332 \sim 1.1608$, $p = 0.4727$)，但高血壓 ($HR = 1.3466$, 95% CI : $1.1684 \sim 1.5520$, $p < 0.0001$)、心臟類型疾病 ($HR = 1.6839$, 95% CI : $1.5080 \sim 1.8802$, $p < 0.0001$) 及神經類型疾病 ($HR = 2.9537$, 95% CI : $2.6921 \sim 3.2407$, $p < 0.0001$) 均顯著增加風險；糖尿病 ($HR = 1.1772$, 95% CI : $1.0723 \sim 1.2924$, $p = 0.0006$) 與高血脂 ($HR = 1.5021$, 95% CI : $1.3455 \sim 1.6770$, $p < 0.0001$) 也同樣顯著。

ANOVA 結果顯示，高血壓 ($\text{sum_sq} = 0.5659$, $F = 31.3550$, $p < 0.0001$)、心臟類型疾病 ($\text{sum_sq} = 4.4082$, $F = 244.2542$, $p < 0.0001$)、神經類型疾病 ($\text{sum_sq} = 15.0797$, $F = 835.5592$, $p < 0.0001$)、糖尿病 ($\text{sum_sq} = 0.6549$, $F = 36.2878$,

$p < 0.0001$ ）及高血脂（ $\text{sum_sq} = 4.4499$, $F = 246.5670$, $p < 0.0001$ ）對模型具有顯著貢獻。

在數值型共變因模型中，年齡效應更加明顯（ $\text{HR} = 1.0578$, 95% CI : 1.0546 ~ 1.0611, $p < 0.0001$ ），且女性較男性風險顯著上升（ $\text{HR} = 1.1846$, 95% CI : 1.0846 ~ 1.2938, $p = 0.0002$ ）。嚴重型精神疾病次數顯著提升風險（ $\text{HR} = 1.5433$, 95% CI : 1.3857 ~ 1.7189, $p < 0.0001$ ），而高血壓次數則有輕微保護趨勢（ $\text{HR} = 0.9526$, 95% CI : 0.9355 ~ 0.9700, $p < 0.0001$ ）。心臟類型疾病次數（ $\text{HR} = 1.0094$, 95% CI : 1.0037 ~ 1.0152, $p = 0.0012$ ）與神經類型疾病次數（ $\text{HR} = 1.0369$, 95% CI : 1.0255 ~ 1.0484, $p < 0.0001$ ）均顯著累積風險；糖尿病次數微幅增加風險（ $\text{HR} = 1.0093$, 95% CI : 1.0003 ~ 1.0185, $p = 0.0430$ ），而高血脂次數影響不顯著（ $\text{HR} = 1.0093$, 95% CI : 0.9879 ~ 1.0312, $p = 0.3971$ ）。

ANOVA 分析中，年齡（ $\text{sum_sq} = 10.2659$, $F = 563.2238$, $p < 0.0001$ ）、心臟類型疾病次數（ $\text{sum_sq} = 2.3564$, $F = 129.2791$, $p < 0.0001$ ）、神經類型疾病次數（ $\text{sum_sq} = 1.0251$, $F = 56.2419$, $p < 0.0001$ ）均對模型有顯著影響；而嚴重型精神疾病次數亦具有一定貢獻（ p 值為 0.0002），則高血壓次數（ $p < 0.0001$ ）顯示與風險有負相關。

綜合上述來說，二元模型強調共病存在與否對預後的影響，數值模型則進一步揭示部分共病累積次數對存活風險具有持續加成效應，臨床在管理缺血性中風患者時，除了評估共病有無，更應關注其嚴重程度與累積負擔。

4.3.4 藥物的比例風險模型與ANOVA

在「藥物的比例風險模型」分析中，先以「二元型共變因藥物預測缺血型中風的風險比（Hazard Ratio, HR；95% Confidence Interval, 95% CI）」為核心，探討缺血性中風患者在使用各類心血管用藥（作為共變因）後，嚴重型精神疾病（作為變因）之相對風險變化。隨後，依次檢視「使用次數」、「劑量與數值型指標（平均值、最大值、最小值、中位數）」以及「用藥起訖時間（平均值、最大值、最小值、中位數）」等 Cox 模型與 ANOVA 結果，全面呈現八種藥物（Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin）對缺血性中風患者的風險影響，關於各項藥物預測缺血型中風對照組診斷前三診斷排除的風險比與 ANOVA 詳細結果，請查閱附錄四，以下表 4.3（使用率、使用次數、（劑量平均值、最大值、最小值、中位數）、（用藥起訖時間平均值、最大值、最小值、中位數））呈現，二元型和數值型共變因藥物對預測缺血性中風風險的影響結果（ HR (95% CI) 欄位是正相關以字形正體表示、反相關以字形粗體表示、無相關以字形斜體表示）：

表 4.3 二元型共變因藥物對預測缺血性中風風險的影響（使用率）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.041308 (0.933624 ~ 1.161412) 正相關 | 0.002873 / 0.159172 / 0.689920 |
| Warfarin | 1.035591 (0.928528 ~ 1.154998) 正相關 | 0.002749 / 0.152312 / 0.696336 |
| Clopidogrel | 1.042660 (0.934828 ~ 1.162931) 正相關 | 0.003805 / 0.211011 / 0.645977 |
| Apixaban | 1.064056 (0.954004 ~ 1.186803) 正相關 | 0.013242 / 0.734095 / 0.391561 |
| Rivaroxaban | 1.046663 (0.938439 ~ 1.167368) 正相關 | 0.004533 / 0.251207 / 0.616228 |
| Dabigatran etexilate | 1.040179 (0.932624 ~ 1.160137) 正相關 | 0.002823 / 0.156443 / 0.692454 |
| Cilostazol | 1.040749 (0.933128 ~ 1.160781) 正相關 | 0.002026 / 0.112271 / 0.737574 |
| Enoxaparin | 1.073243 (0.962189 ~ 1.197115) 正相關 | 0.009238 / 0.511988 / 0.474281 |

表 4.3 數值型共變因藥物對預測缺血性中風風險的影響（使用次數）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|---------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.546481 (1.388711 ~ 1.722174) 正相關 | 0.239821 / 13.163919 / 0.000286 |
| Warfarin | 1.543665 (1.385995 ~ 1.719271) 正相關 | 0.260252 / 14.281584 / 0.000157 |
| Clopidogrel | 1.541053 (1.383343 ~ 1.716743) 正相關 | 0.252965 / 13.878411 / 0.000195 |
| Apixaban | 1.579548 (1.418259 ~ 1.759179) 正相關 | 0.330721 / 18.158472 / 0.000020 |
| Rivaroxaban | 1.545860 (1.387962 ~ 1.721721) 正相關 | 0.264196 / 14.495469 / 0.000141 |
| Dabigatran etexilate | 1.543315 (1.385699 ~ 1.718858) 正相關 | 0.252285 / 13.841137 / 0.000199 |
| Cilostazol | 1.541700 (1.384192 ~ 1.717132) 正相關 | 0.247289 / 13.568994 / 0.000230 |
| Enoxaparin | 1.556903 (1.397672 ~ 1.734273) 正相關 | 0.300338 / 16.483738 / 0.000049 |

表 4.3 數值型共變因藥物對預測缺血性中風風險的影響（平均值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|---------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.555316 (1.396311 ~ 1.732429) 正相關 | 0.269174 / 14.779349 / 0.000121 |
| Warfarin | 1.542351 (1.384780 ~ 1.717851) 正相關 | 0.253751 / 13.921598 / 0.000191 |
| Clopidogrel | 1.552858 (1.394201 ~ 1.729570) 正相關 | 0.266385 / 14.622055 / 0.000131 |
| Apixaban | 1.570888 (1.410434 ~ 1.749595) 正相關 | 0.298252 / 16.368684 / 0.000052 |
| Rivaroxaban | 1.547553 (1.389482 ~ 1.723607) 正相關 | 0.263417 / 14.452534 / 0.000144 |
| Dabigatran etexilate | 1.543291 (1.385680 ~ 1.718829) 正相關 | 0.252602 / 13.858549 / 0.000197 |
| Cilostazol | 1.542404 (1.384867 ~ 1.717862) 正相關 | 0.248020 / 13.607568 / 0.000225 |
| Enoxaparin | 1.557589 (1.398411 ~ 1.734885) 正相關 | 0.280241 / 15.377951 / 0.000088 |

表 4.3 數值型共變因藥物對預測缺血性中風風險的影響（最大值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|---------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.549799 (1.391411 ~ 1.726218) 正相關 | 0.269185 / 14.775610 / 0.000121 |
| Warfarin | 1.541805 (1.384313 ~ 1.717214) 正相關 | 0.252129 / 13.832511 / 0.000200 |
| Clopidogrel | 1.547137 (1.389102 ~ 1.723151) 正相關 | 0.260603 / 14.300134 / 0.000156 |
| Apixaban | 1.571821 (1.411283 ~ 1.750620) 正相關 | 0.301363 / 16.539884 / 0.000048 |
| Rivaroxaban | 1.547742 (1.389654 ~ 1.723814) 正相關 | 0.264118 / 14.491067 / 0.000141 |
| Dabigatran etexilate | 1.543248 (1.385642 ~ 1.718780) 正相關 | 0.252580 / 13.857327 / 0.000197 |
| Cilostazol | 1.542442 (1.384902 ~ 1.717902) 正相關 | 0.248130 / 13.613642 / 0.000225 |
| Enoxaparin | 1.556235 (1.397182 ~ 1.733394) 正相關 | 0.280869 / 15.412376 / 0.000086 |

表 4.3 數值型共變因藥物對預測缺血性中風風險的影響（最小值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|---------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.553774 (1.394910 ~ 1.730730) 正相關 | 0.264372 / 14.516238 / 0.000139 |
| Warfarin | 1.541805 (1.384781 ~ 1.717972) 正相關 | 0.252129 / 13.832511 / 0.000200 |
| Clopidogrel | 1.555099 (1.396189 ~ 1.732095) 正相關 | 0.266608 / 14.636322 / 0.000130 |
| Apixaban | 1.568464 (1.408249 ~ 1.746906) 正相關 | 0.293372 / 16.100206 / 0.000060 |
| Rivaroxaban | 1.547218 (1.389179 ~ 1.723236) 正相關 | 0.262363 / 14.394603 / 0.000148 |
| Dabigatran etexilate | 1.543316 (1.385702 ~ 1.718856) 正相關 | 0.252592 / 13.858008 / 0.000197 |
| Cilostazol | 1.542365 (1.384834 ~ 1.717817) 正相關 | 0.248051 / 13.609287 / 0.000225 |
| Enoxaparin | 1.558918 (1.399623 ~ 1.736344) 正相關 | 0.277604 / 15.232979 / 0.000095 |

表 4.3 數值型共變因藥物對預測缺血性中風風險的影響（中位數）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|---------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.556522 (1.397394 ~ 1.733770) 正相關 | 0.268631 / 14.750391 / 0.000123 |
| Warfarin | 1.541951 (1.384405 ~ 1.717425) 正相關 | 0.253660 / 13.916596 / 0.000191 |
| Clopidogrel | 1.554804 (1.395943 ~ 1.731744) 正相關 | 0.267807 / 14.702170 / 0.000126 |
| Apixaban | 1.570491 (1.410073 ~ 1.749159) 正相關 | 0.297429 / 16.323340 / 0.000053 |
| Rivaroxaban | 1.547626 (1.389547 ~ 1.723688) 正相關 | 0.263624 / 14.463885 / 0.000143 |
| Dabigatran etexilate | 1.543312 (1.385698 ~ 1.718853) 正相關 | 0.252640 / 13.860647 / 0.000197 |
| Cilostazol | 1.542505 (1.384958 ~ 1.717975) 正相關 | 0.248217 / 13.618328 / 0.000224 |
| Enoxaparin | 1.557338 (1.398185 ~ 1.734606) 正相關 | 0.280754 / 15.406214 / 0.000087 |

表 4.3 數值型共變因藥物對預測缺血性中風風險的影響（起訖時間平均值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|---------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.530650 (1.373644 ~ 1.705601) 正相關 | 0.247581 / 13.582982 / 0.000228 |
| Warfarin | 1.543134 (1.385536 ~ 1.718659) 正相關 | 0.252833 / 13.871198 / 0.000196 |
| Clopidogrel | 1.542681 (1.385128 ~ 1.718155) 正相關 | 0.244324 / 13.407659 / 0.000251 |
| Apixaban | 1.576033 (1.415061 ~ 1.755318) 正相關 | 0.309084 / 16.965573 / 0.000038 |
| Rivaroxaban | 1.546688 (1.388660 ~ 1.722700) 正相關 | 0.259630 / 14.244248 / 0.000161 |
| Dabigatran etexilate | 1.543248 (1.385651 ~ 1.718769) 正相關 | 0.253294 / 13.896635 / 0.000193 |
| Cilostazol | 1.541374 (1.383929 ~ 1.716731) 正相關 | 0.245887 / 13.491022 / 0.000240 |
| Enoxaparin | 1.582330 (1.420649 ~ 1.762413) 正相關 | 0.307486 / 16.875824 / 0.000040 |

表 4.3 數值型共變因藥物對預測缺血性中風風險的影響（起訖時間最大值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|---------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.547966 (1.389139 ~ 1.724952) 正相關 | 0.282846 / 15.519022 / 0.000082 |
| Warfarin | 1.543813 (1.386127 ~ 1.719437) 正相關 | 0.254153 / 13.944239 / 0.000188 |
| Clopidogrel | 1.541784 (1.384317 ~ 1.717164) 正相關 | 0.248865 / 13.653859 / 0.000220 |
| Apixaban | 1.578641 (1.417415 ~ 1.758204) 正相關 | 0.322901 / 17.726476 / 0.000026 |
| Rivaroxaban | 1.547984 (1.389844 ~ 1.724117) 正相關 | 0.265836 / 14.585193 / 0.000134 |
| Dabigatran etexilate | 1.543534 (1.385911 ~ 1.719084) 正相關 | 0.253567 / 13.911635 / 0.000192 |
| Cilostazol | 1.542525 (1.384954 ~ 1.718024) 正相關 | 0.249383 / 13.682148 / 0.000217 |
| Enoxaparin | 1.581925 (1.420299 ~ 1.761943) 正相關 | 0.292422 / 16.046908 / 0.000062 |

表 4.3 數值型共變因藥物對預測缺血性中風風險的影響（起訖時間最小值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|---------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.532813 (1.376169 ~ 1.707286) 正相關 | 0.234069 / 12.842922 / 0.000339 |
| Warfarin | 1.547507 (1.389429 ~ 1.723569) 正相關 | 0.259525 / 14.239602 / 0.000161 |
| Clopidogrel | 1.542844 (1.385215 ~ 1.718410) 正相關 | 0.249110 / 13.674931 / 0.000217 |
| Apixaban | 1.557378 (1.398281 ~ 1.734577) 正相關 | 0.269955 / 14.812786 / 0.000119 |
| Rivaroxaban | 1.543297 (1.385621 ~ 1.718915) 正相關 | 0.249979 / 13.714586 / 0.000213 |
| Dabigatran etexilate | 1.543078 (1.385493 ~ 1.718586) 正相關 | 0.252799 / 13.869377 / 0.000196 |
| Cilostazol | 1.540858 (1.383458 ~ 1.716166) 正相關 | 0.244373 / 13.408670 / 0.000251 |
| Enoxaparin | 1.566870 (1.406770 ~ 1.745190) 正相關 | 0.276428 / 15.168406 / 0.000098 |

表 4.3 數值型共變因藥物對預測缺血性中風風險的影響（起訖時間中位數）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|---------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.529801 (1.373011 ~ 1.704496) 正相關 | 0.243175 / 13.341376 / 0.000260 |
| Warfarin | 1.543501 (1.385862 ~ 1.719071) 正相關 | 0.253622 / 13.914585 / 0.000191 |
| Clopidogrel | 1.543994 (1.386303 ~ 1.719621) 正相關 | 0.245007 / 13.445975 / 0.000246 |
| Apixaban | 1.573395 (1.412687 ~ 1.752384) 正相關 | 0.301877 / 16.568952 / 0.000047 |
| Rivaroxaban | 1.545708 (1.387777 ~ 1.721612) 正相關 | 0.256565 / 14.075932 / 0.000176 |
| Dabigatran etexilate | 1.543099 (1.385516 ~ 1.718605) 正相關 | 0.253226 / 13.892940 / 0.000194 |
| Cilostazol | 1.541542 (1.384099 ~ 1.716893) 正相關 | 0.245012 / 13.443190 / 0.000246 |
| Enoxaparin | 1.580956 (1.419427 ~ 1.760867) 正相關 | 0.301707 / 16.558380 / 0.000047 |

在二元型共變因模型中（附錄四），以「使用率」作為主要指標，八種心血管藥物心血管用藥（Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin）對嚴重型精神疾病患者缺血性中風風險的相對風險比（HR）介於 1.0356 ~ 1.0732 之間，95% 信賴區間均包含 1，且 ANOVA 結果中 sum_sq/F/P 值介於 0.0020 ~ 0.0132/0.1123 ~ 0.7341/0.3916 ~ 0.7376，雖然是否使用藥物皆為「正相關」，但 ANOVA 結果並不顯著，表示單純「是否使用藥物」對預測風險解釋力有限。

在數值型共變因（使用次數）模型中，所有藥物 HR 介於 1.5411 ~ 1.5795，95% CI 均不含 1，且 ANOVA 結果 sum_sq/F/P 欄位值介於 0.2398 ~ 0.3307/13.1639 ~ 18.1585/0.00002 ~ 0.00029，均達統計顯著，呈現明顯且一致的正相關效應，顯示每增加一次用藥次數即顯著提升嚴重型精神疾病患者缺血性中風的相對風險（附錄四）。

在以劑量（平均值、最大值、最小值、中位數）及用藥起訖時間（平均值、最大值、最小值、中位數）作為數值型共變因時，八種藥物 HR 約落在 1.5307 ~ 1.5823 範圍，95% CI 均不含 1；ANOVA 結果 sum_sq/F/P 欄位值多位於 0.2443 ~ 0.3307/13.4077 ~ 17.7265/0.00004 ~ 0.00026，均顯著且呈正相關，說明劑量與用藥起訖時間的統計量均為預測嚴重型精神疾病患者缺血性中風風險的重要且顯著變因（附錄四）。

總結來看，「是否使用藥物」雖有正相關趨勢，但未達統計顯著；相較之下，「用藥次數」、「劑量」與「用藥起訖時間」等數值型共變因皆顯著正相關，表示這些變因在預測嚴重型精神疾病後缺血性中風風險中具較高的解釋力與預測價值。

4.4 事件為出血型中風對照組診斷前三診斷排除結果

本研究以出血型中風對照組診斷前三診斷排除結果作為主要事件，將嚴重型精神疾病患者與非精神疾病患者進行比較分析，以評估其風險差異。

4.4.1 獨立性檢定

在本小節中，採用多種統計方法檢驗案例組與對照組在患者基本資訊與共病分布上的差異，以便清楚呈現各項檢定結果。

在進行獨立性檢定時，首先針對年齡這一連續變數，同時使用 t 檢定、U 檢定與 KS 檢定，評估兩組樣本在平均值、中位數及整體分布上的差異。下表 4.4 年齡獨立檢定，呈現了年齡詳細統計量與 P 值結果：

表 4.4 年齡獨立檢定

| 年齡 | 案例組 (N=17,006) | 對照組 (N=92,326) | 統計量 | P 值 |
|--------------|----------------------|----------------------|----------------------|----------|
| 平均值 (標準差) | 54.6430 (19.2000) | 55.9692 (19.9352) | t = -8.0175 | < 0.0001 |
| | | | U = 751,185,578.0000 | < 0.0001 |
| | | | D = 0.0521 | < 0.0001 |

從表中可以看到，t 檢定的 t 值為 -8.0175 (P < 0.0001) 結果顯示兩組平均年齡之差達到高度顯著，而 U 檢定的 U 值為 751,185,578.0000 (P < 0.0001)，以及 KS 檢定的 D 值為 0.0521 (P < 0.0001)，三種方法均一致指向兩組在年齡分布上存在顯著差異，顯示在後續的多變量生存分析中需考慮以年齡作為重要協變量。

接著，在性別、事件率與各項共病指標上，採用卡方檢定並輔以 Fisher 精確檢定來檢驗二元類別變數的獨立性。下表 4.4 性別、事件、各項共病（高血壓、心臟類型疾病、神經類型疾病、糖尿病、高血脂）獨立檢定，呈現了案例組與對照組間的比較結果：

表 4.4 性別、事件、各項共病獨立檢定

| 分類 | 案例組 (N=17,006) | 對照組 (N=92,326) | 統計量 | P 值 |
|------------|----------------------|----------------------|----------------------|----------|
| 性別 | 10,118 (女性：59.5%) | 50,059 (女性：54.2%) | $\chi^2 = 161.5919$ | < 0.0001 |
| | 6,888 (男性：40.5%) | 42,267 (男性：45.8%) | odds ratio = 0.8063 | < 0.0001 |
| 事件 | 174 (1.0%) | 541 (0.6%) | $\chi^2 = 42.2505$ | < 0.0001 |
| | | | odds ratio = 1.7538 | < 0.0001 |
| 高血壓 | 9,770 (57.5%) | 43,583 (47.2%) | $\chi^2 = 603.2438$ | < 0.0001 |
| | | | odds ratio = 1.5100 | < 0.0001 |
| 心臟類型 疾病 | 7,058 (41.5%) | 31,403 (34.0%) | $\chi^2 = 353.2873$ | < 0.0001 |
| | | | odds ratio = 1.3764 | < 0.0001 |
| 神經類型 疾病 | 5,072 (29.8%) | 10,493 (11.4%) | $\chi^2 = 4007.9210$ | < 0.0001 |
| | | | odds ratio = 3.3145 | < 0.0001 |
| 糖尿病 | 4,463 (26.2%) | 17,897 (19.4%) | $\chi^2 = 415.2956$ | < 0.0001 |
| | | | odds ratio = 1.4797 | < 0.0001 |
| 高血脂 | 7,325 (43.1%) | 31,416 (34.0%) | $\chi^2 = 513.6243$ | < 0.0001 |
| | | | odds ratio = 1.4670 | < 0.0001 |

如表所示，性別分布在檢定中達到高度顯著 ($\chi^2 = 161.5919$, $P < 0.0001$; OR = 0.8063, $P < 0.0001$)，顯示案例組中女性比例 (59.5%) 顯著高於對照組 (54.2%)。在事件發生率方面 (1.0% vs. 0.6%), $\chi^2 = 42.2505$ ($P < 0.0001$) 及 OR = 1.7538 ($P < 0.0001$) 皆顯示統計學上顯著差異。各項共病亦均呈現顯著差異，其中神經類型疾病差異尤為明顯 (案例組 29.8% vs. 對照組 11.4%, $\chi^2 =$

4007.9210，OR = 3.3145，P < 0.0001），並且高血壓（案例組 57.5% vs. 對照組 47.2%， $\chi^2 = 603.2438$ ，OR = 1.5100，P < 0.0001）、心臟類型疾病（案例組 41.5% vs. 對照組 34.0%， $\chi^2 = 353.2873$ ，OR = 1.3764，P < 0.0001）、糖尿病（案例組 26.2% vs. 對照組 19.4%， $\chi^2 = 415.2956$ ，OR = 1.4797，P < 0.0001）及高血脂（案例組 43.1% vs. 對照組 34.0%， $\chi^2 = 513.6243$ ，OR = 1.4670，P < 0.0001）亦均達高度顯著，顯示上述共病可能為影響出血性中風發生的重要風險因子。

綜合上述獨立性檢定結果，確認在患者基本資訊及主要共病上，案例組與對照組間均存在顯著差異，為後續生存分析與比例風險模型的協變數選擇提供了實證基礎。

4.4.2 藥物獨立性檢定

在針對出血型中風對照組診斷前三診斷排除結果事件的分析中，將進一步檢驗案例組與對照組在藥物使用情形上的差異，其中包含藥物使用率、劑量、使用次數與用藥起訖時間等多重指標的獨立性檢定。為了全面掌握這些變數的差異，各項指標將對應到各自的檢定如 t 檢定、U 檢定、KS 檢定、卡方檢定及 Fisher 精確檢定，以評估兩組樣本在使用率、平均值、標準差及整體分布上的顯著性差異，而關於表中設定的詳細說明，這裡將以下表舉例說明，主要能分成三個區域來看。

第一個區域是分類欄位中的使用率，意思是將案例組與對照組有使用藥物和沒有使用藥物的人（表中欄位顯示的是有使用藥物的人數），使用卡方檢定及 Fisher 精確檢定來觀察當中的統計量與 P 值。

第二個區域是分類欄位中的中位數、使用次數、最大值、平均值、最小值，意思是將案例組與對照組每位使用該藥物的人，針對該藥物的使用劑量（藥物劑量單位為毫克），使用 t 檢定、U 檢定、KS 檢定來觀察當中的統計量與 P 值。

第三個區域是分類欄位中的起訖時間平均值、起訖時間最大值、起訖時間最小值、起訖時間中位數、起訖時間最小值，意思是將案例組與對照組每位有使用該藥物的人，針對該藥物的使用起訖時間（藥物起訖時間單位為小時），使用 t 檢定、U 檢定、KS 檢定來觀察當中的統計量與 P 值，以下表 4.4 用藥獨立檢定，分別呈現八種心血管用藥的各項檢定結果：

表 4.4 每人 Aspirin 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,326) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|------------------------|----------|
| 使用率 | 27,161 (29.4%) | 5,828 (34.3%) | $\chi^2 = 160.4422$ | < 0.0001 |
| | | | odds ratio = 1.2509 | < 0.0001 |
| 中位數 | 147.4550 (104.7478) | 126.8477 (91.2825) | $t = -13.9269$ | < 0.0001 |
| | | | $U = 71,642,510.5000$ | < 0.0001 |
| | | | $D = 0.0938$ | < 0.0001 |
| 使用次數 | 2.4268 (2.2621) | 3.6759 (4.4537) | $t = 31.1481$ | < 0.0001 |
| | | | $U = 96,301,668.5000$ | < 0.0001 |
| | | | $D = 0.1720$ | < 0.0001 |
| 最大值 | 181.9921 (122.1687) | 168.1492 (120.1885) | $t = -7.8714$ | < 0.0001 |
| | | | $U = 74,159,933.0000$ | < 0.0001 |
| | | | $D = 0.0663$ | < 0.0001 |
| 平均值 | 151.7791 (99.2731) | 132.4767 (85.6465) | $t = -13.7837$ | < 0.0001 |
| | | | $U = 72,364,304.0000$ | < 0.0001 |
| | | | $D = 0.0922$ | < 0.0001 |
| 最小值 | 130.0558 (98.7607) | 110.1997 (79.7319) | $t = -14.3762$ | < 0.0001 |
| | | | $U = 72,553,764.0000$ | < 0.0001 |
| | | | $D = 0.0852$ | < 0.0001 |
| 起訖時間 平均值 | 64.7423 (63.5949) | 96.1200 (110.4929) | $t = 29.3441$ | < 0.0001 |
| | | | $U = 97,806,446.5000$ | < 0.0001 |
| | | | $D = 0.1963$ | < 0.0001 |
| 起訖時間 最大值 | 97.9961 (107.8856) | 175.4506 (237.1943) | $t = 38.4006$ | < 0.0001 |
| | | | $U = 101,018,285.5000$ | < 0.0001 |
| | | | $D = 0.2283$ | < 0.0001 |
| 起訖時間 最小值 | 41.2526 (59.1245) | 47.4156 (85.8691) | $t = 6.6025$ | < 0.0001 |
| | | | $U = 78,524,185.0000$ | 0.3448 |
| | | | $D = 0.0358$ | < 0.0001 |
| 起訖時間 中位數 | 60.2716 (62.7616) | 85.2924 (100.9603) | $t = 24.4046$ | < 0.0001 |
| | | | $U = 94,746,670.0000$ | < 0.0001 |
| | | | $D = 0.1650$ | < 0.0001 |

表 4.4 每人 Warfarin 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立
檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,326) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 8,371 (9.1%) | 1,631 (9.6%) | $\chi^2 = 4.7433$ | 0.0294 |
| | | | odds ratio = 1.0639 | 0.0299 |
| 中位數 | 3.9720 (1.7818) | 3.9098 (2.0419) | t = -1.2585 | 0.2083 |
| | | | U = 6,587,653.5000 | 0.0221 |
| | | | D = 0.0447 | 0.0136 |
| 使用次數 | 5.2579 (6.7225) | 13.0950 (21.5679) | t = 27.1609 | < 0.0001 |
| | | | U = 9,292,013.0000 | < 0.0001 |
| | | | D = 0.2778 | < 0.0001 |
| 最大值 | 5.1305 (2.2600) | 5.8487 (3.1161) | t = 10.9637 | < 0.0001 |
| | | | U = 7,763,461.5000 | < 0.0001 |
| | | | D = 0.1308 | < 0.0001 |
| 平均值 | 3.9762 (1.6840) | 3.9258 (1.8974) | t = -1.0827 | 0.2790 |
| | | | U = 6,614,296.0000 | 0.0419 |
| | | | D = 0.0743 | < 0.0001 |
| 最小值 | 2.8985 (1.8210) | 2.2649 (1.6300) | t = -13.0685 | < 0.0001 |
| | | | U = 5,348,649.0000 | < 0.0001 |
| | | | D = 0.1619 | < 0.0001 |
| 起訖時間 平均值 | 27.2577 (21.9884) | 28.8035 (19.4704) | t = 2.6443 | 0.0082 |
| | | | U = 6,453,817.5000 | < 0.0001 |
| | | | D = 0.1093 | < 0.0001 |
| 起訖時間 最大值 | 46.7055 (45.1353) | 68.6021 (65.5163) | t = 16.4972 | < 0.0001 |
| | | | U = 8,652,629.5000 | < 0.0001 |
| | | | D = 0.1948 | < 0.0001 |
| 起訖時間 最小值 | 13.7450 (20.2123) | 9.4356 (15.8840) | t = -7.9837 | < 0.0001 |
| | | | U = 5,420,248.0000 | < 0.0001 |
| | | | D = 0.1527 | < 0.0001 |
| 起訖時間 中位數 | 25.9799 (20.1398) | 25.7575 (17.6162) | t = -0.2349 | 0.8143 |
| | | | U = 7,044,083.0000 | 0.0400 |
| | | | D = 0.0893 | < 0.0001 |

表 4.4 每人 Clopidogrel 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,326) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 6,762 (7.3%) | 1,416 (8.3%) | $\chi^2 = 20.8520$ | < 0.0001 |
| | | | odds ratio = 1.1493 | < 0.0001 |
| 中位數 | 93.3317 (66.8318) | 87.5132 (52.5017) | t = -3.0829 | 0.0021 |
| | | | U = 4,676,329.0000 | 0.0063 |
| | | | D = 0.0218 | 0.6232 |
| 使用次數 | 2.1476 (1.9534) | 3.4089 (3.7184) | t = 18.3226 | < 0.0001 |
| | | | U = 6,124,538.5000 | < 0.0001 |
| | | | D = 0.2162 | < 0.0001 |
| 最大值 | 131.9820 (139.1042) | 129.9788 (127.6385) | t = -0.5115 | 0.6090 |
| | | | U = 4,816,151.5000 | 0.6001 |
| | | | D = 0.0137 | 0.9779 |
| 平均值 | 100.0491 (71.0719) | 95.5008 (55.6157) | t = -2.3339 | 0.0196 |
| | | | U = 4,788,995.0000 | 0.9782 |
| | | | D = 0.0272 | 0.3467 |
| 最小值 | 79.8026 (44.6828) | 78.3369 (34.7458) | t = -1.1629 | 0.2449 |
| | | | U = 4,771,065.5000 | 0.3366 |
| | | | D = 0.0032 | > 0.9900 |
| 起訖時間 平均值 | 54.3857 (56.3108) | 73.9742 (80.4241) | t = 10.9578 | < 0.0001 |
| | | | U = 5,624,340.5000 | < 0.0001 |
| | | | D = 0.1577 | < 0.0001 |
| 起訖時間 最大值 | 78.5949 (113.0654) | 135.3460 (171.4673) | t = 17.7619 | < 0.0001 |
| | | | U = 5,975,883.5000 | < 0.0001 |
| | | | D = 0.2024 | < 0.0001 |
| 起訖時間 最小值 | 36.9092 (50.7906) | 35.5904 (60.1971) | t = -0.8589 | 0.3904 |
| | | | U = 4,361,757.5000 | < 0.0001 |
| | | | D = 0.1131 | < 0.0001 |
| 起訖時間 中位數 | 51.1585 (55.6988) | 65.6328 (76.9985) | t = 7.2681 | < 0.0001 |
| | | | U = 5,412,099.0000 | < 0.0001 |
| | | | D = 0.1280 | < 0.0001 |

表 4.4 每人 Apixaban 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立
檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,326) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 2,023 (2.2%) | 942 (5.5%) | $\chi^2 = 610.1430$ | < 0.0001 |
| | | | odds ratio = 2.6176 | < 0.0001 |
| 中位數 | 4.9666 (1.9973) | 4.8195 (1.8415) | t = -1.9132 | 0.0558 |
| | | | U = 926 690.5000 | 0.1618 |
| | | | D = 0.0252 | 0.7966 |
| 使用次數 | 1.9565 (1.8083) | 3.2399 (3.3135) | t = 13.6062 | < 0.0001 |
| | | | U = 1 232 674.5000 | < 0.0001 |
| | | | D = 0.2289 | < 0.0001 |
| 最大值 | 5.2373 (2.1830) | 5.2389 (2.1553) | t = 0.0184 | 0.9853 |
| | | | U = 956 066.5000 | 0.8583 |
| | | | D = 0.0069 | > 0.9900 |
| 平均值 | 4.9683 (1.9542) | 4.8189 (1.7653) | t = -1.9973 | 0.0459 |
| | | | U = 917 198.5000 | 0.0687 |
| | | | D = 0.0473 | 0.1080 |
| 最小值 | 4.7065 (1.9596) | 4.3989 (1.7721) | t = -4.1001 | < 0.0001 |
| | | | U = 879 681.5000 | < 0.0001 |
| | | | D = 0.0589 | 0.0221 |
| 起訖時間 平均值 | 50.4251 (49.3469) | 66.6667 (62.7015) | t = 6.8247 | < 0.0001 |
| | | | U = 1 151 194.0000 | < 0.0001 |
| | | | D = 0.1745 | < 0.0001 |
| 起訖時間 最大值 | 69.9595 (72.6875) | 119.3800 (140.3268) | t = 12.6182 | < 0.0001 |
| | | | U = 1 214 509.0000 | < 0.0001 |
| | | | D = 0.2133 | < 0.0001 |
| 起訖時間 最小值 | 35.9323 (47.2737) | 32.4427 (47.0384) | t = -1.2919 | 0.0610 |
| | | | U = 894 240.5000 | 0.0069 |
| | | | D = 0.0732 | 0.0019 |
| 起訖時間 中位數 | 47.9137 (48.8849) | 59.6093 (58.6184) | t = 5.3029 | < 0.0001 |
| | | | U = 1 107 195.0000 | < 0.0001 |
| | | | D = 0.1402 | < 0.0001 |

表 4.4 每人 Rivaroxaban 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,326) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 1,238 (1.3%) | 492 (2.9%) | $\chi^2 = 222.1775$ | < 0.0001 |
| | | | odds ratio = 2.1921 | < 0.0001 |
| 中位數 | 17.7817 (2.9646) | 17.8100 (3.1539) | t = 0.1756 | 0.8606 |
| | | | U = 310 339.0000 | 0.4792 |
| | | | D = 0.0257 | 0.9678 |
| 使用次數 | 1.7480 (1.4129) | 2.9512 (3.3575) | t = 10.4902 | < 0.0001 |
| | | | U = 393 039.0000 | < 0.0001 |
| | | | D = 0.2431 | < 0.0001 |
| 最大值 | 18.0533 (2.9129) | 18.3384 (2.9457) | t = 1.8306 | 0.0673 |
| | | | U = 322 277.5000 | 0.0212 |
| | | | D = 0.0620 | 0.1271 |
| 平均值 | 17.7626 (2.8984) | 17.7642 (2.9629) | t = 0.0105 | > 0.9900 |
| | | | U = 301 572.0000 | 0.7262 |
| | | | D = 0.0489 | 0.3544 |
| 最小值 | 17.4273 (3.1477) | 17.0783 (3.3903) | t = -2.0350 | 0.0420 |
| | | | U = 289 635.5000 | 0.0717 |
| | | | D = 0.0375 | 0.6874 |
| 起訖時間 平均值 | 39.4402 (43.4170) | 65.2929 (69.8719) | t = 9.2729 | < 0.0001 |
| | | | U = 398 738.5000 | < 0.0001 |
| | | | D = 0.2736 | < 0.0001 |
| 起訖時間 最大值 | 53.7318 (72.5607) | 109.3394 (130.1825) | t = 11.2615 | < 0.0001 |
| | | | U = 414 807.5000 | < 0.0001 |
| | | | D = 0.2857 | < 0.0001 |
| 起訖時間 最小值 | 28.1753 (38.0912) | 36.4431 (60.7981) | t = 3.3942 | 0.0007 |
| | | | U = 318 627.0000 | 0.1327 |
| | | | D = 0.0860 | 0.0102 |
| 起訖時間 中位數 | 37.7835 (42.8439) | 59.4309 (67.7523) | t = 7.9380 | < 0.0001 |
| | | | U = 387 162.5000 | < 0.0001 |
| | | | D = 0.2243 | < 0.0001 |

表 4.4 每人 Dabigatran etexilate 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,326) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 409 (0.4%) | 86 (0.5%) | $\chi^2 = 1.2530$ | 0.2630 |
| | | | odds ratio = 1.1423 | 0.2632 |
| 中位數 | 139.1687 (25.7351) | 140.4070 (24.5305) | t = 0.4088 | 0.6828 |
| | | | U = 17,891.0000 | 0.6874 |
| | | | D = 0.0206 | > 0.9900 |
| 使用次數 | 1.9169 (1.4696) | 2.8837 (3.0231) | t = 4.4442 | < 0.0001 |
| | | | U = 21,734.0000 | 0.0002 |
| | | | D = 0.1878 | 0.0113 |
| 最大值 | 140.6357 (24.6835) | 143.0233 (21.9126) | t = 0.8307 | 0.4066 |
| | | | U = 18,179.0000 | 0.3856 |
| | | | D = 0.0341 | > 0.9900 |
| 平均值 | 138.6871 (25.3548) | 140.8034 (23.1943) | t = 0.7137 | 0.4758 |
| | | | U = 18,165.5000 | 0.6006 |
| | | | D = 0.0414 | > 0.9900 |
| 最小值 | 136.4181 (28.7986) | 138.6628 (27.0231) | t = 0.6639 | 0.5071 |
| | | | U = 18,140.5000 | 0.4888 |
| | | | D = 0.0322 | > 0.9900 |
| 起訖時間 平均值 | 39.2996 (36.5200) | 57.1529 (47.5864) | t = 3.8934 | 0.0001 |
| | | | U = 22,400.5000 | < 0.0001 |
| | | | D = 0.2587 | 0.0001 |
| 起訖時間 最大值 | 54.0856 (55.2980) | 92.4302 (79.7569) | t = 5.3668 | < 0.0001 |
| | | | U = 23,472.5000 | < 0.0001 |
| | | | D = 0.2464 | 0.0003 |
| 起訖時間 最小值 | 28.1198 (35.3163) | 34.8721 (46.7214) | t = 1.5166 | 0.1300 |
| | | | U = 18,424.5000 | 0.4870 |
| | | | D = 0.0983 | 0.4640 |
| 起訖時間 中位數 | 37.2958 (36.1870) | 51.5233 (47.3964) | t = 3.1270 | 0.0019 |
| | | | U = 21,250.5000 | 0.0024 |
| | | | D = 0.1969 | 0.0068 |

表 4.4 每人 Cilostazol 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立
檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,326) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 148 (0.2%) | 79 (0.5%) | $\chi^2 = 64.1559$ | < 0.0001 |
| | | | odds ratio = 2.9068 | < 0.0001 |
| 中位數 | 89.6959 (20.3976) | 84.9684 (23.4606) | t = -1.5774 | 0.1161 |
| | | | U = 5,282.5000 | 0.1134 |
| | | | D = 0.1070 | 0.5501 |
| 使用次數 | 1.9392 (1.6464) | 3.1392 (5.2641) | t = 2.5533 | 0.0113 |
| | | | U = 6,888.0000 | 0.0169 |
| | | | D = 0.1684 | 0.0934 |
| 最大值 | 91.7230 (18.9854) | 86.7089 (23.6275) | t = -1.7373 | 0.0837 |
| | | | U = 5,239.0000 | 0.0670 |
| | | | D = 0.1163 | 0.4451 |
| 平均值 | 89.7139 (19.7075) | 85.0889 (23.1547) | t = -1.5831 | 0.1148 |
| | | | U = 5,293.0000 | 0.1330 |
| | | | D = 0.1163 | 0.4451 |
| 最小值 | 88.0068 (21.7182) | 82.9114 (24.8535) | t = -1.6001 | 0.1110 |
| | | | U = 5,282.5000 | 0.1206 |
| | | | D = 0.0926 | 0.7231 |
| 起訖時間 平均值 | 67.6606 (52.9851) | 99.5080 (106.5730) | t = 3.0086 | 0.0029 |
| | | | U = 6,938.5000 | 0.0205 |
| | | | D = 0.1930 | 0.0364 |
| 起訖時間 最大值 | 93.3784 (79.1083) | 162.8734 (204.1094) | t = 3.6638 | 0.0003 |
| | | | U = 6,995.5000 | 0.0148 |
| | | | D = 0.1717 | 0.0834 |
| 起訖時間 最小值 | 47.7500 (51.8113) | 61.5949 (96.8764) | t = 1.4042 | 0.1616 |
| | | | U = 6,412.0000 | 0.2299 |
| | | | D = 0.0997 | 0.7168 |
| 起訖時間 中位數 | 69.5474 (59.4862) | 93.0411 (108.9363) | t = 2.7335 | 0.0068 |
| | | | U = 7,073.5000 | 0.0092 |
| | | | D = 0.2335 | 0.0058 |

表 4.4 每人 Enoxaparin 用藥劑量（單位：毫克）、起訖時間（單位：小時）獨立檢定

| 分類 | 案例組 (N=17,006) 平均值 (標準差) | 對照組 (N=92,326) 平均值 (標準差) | 統計量 | P 值 |
|-------------|-----------------------------------|-----------------------------------|---------------------|----------|
| 使用率 | 10,451 (11.3%) | 2,987 (17.6%) | $\chi^2 = 519.4850$ | < 0.0001 |
| | | | odds ratio = 1.6692 | < 0.0001 |
| 中位數 | 52.7524 (24.4312) | 54.8380 (25.4984) | t = 4.0743 | < 0.0001 |
| | | | U = 16,513,367.0000 | < 0.0001 |
| | | | D = 0.0432 | 0.0003 |
| 使用次數 | 1.7679 (1.6281) | 2.5193 (2.9137) | t = 18.2255 | < 0.0001 |
| | | | U = 18,481,746.5000 | < 0.0001 |
| | | | D = 0.1516 | < 0.0001 |
| 最大值 | 54.8950 (26.1484) | 58.5002 (28.4056) | t = 6.5160 | < 0.0001 |
| | | | U = 16,792,465.0000 | < 0.0001 |
| | | | D = 0.0557 | < 0.0001 |
| 平均值 | 52.6917 (24.0764) | 54.6679 (24.9036) | t = 3.9257 | < 0.0001 |
| | | | U = 16,469,936.0000 | < 0.0001 |
| | | | D = 0.0548 | < 0.0001 |
| 最小值 | 50.3689 (23.6646) | 50.5403 (24.2108) | t = 0.3475 | 0.7283 |
| | | | U = 15,652,584.5000 | 0.8000 |
| | | | D = 0.0063 | > 0.9900 |
| 起訖時間 平均值 | 55.5369 (52.6524) | 70.5761 (73.0471) | t = 12.5386 | < 0.0001 |
| | | | U = 17,597,848.5000 | < 0.0001 |
| | | | D = 0.0945 | < 0.0001 |
| 起訖時間 最大值 | 70.7304 (75.1917) | 111.2805 (254.3419) | t = 14.2641 | < 0.0001 |
| | | | U = 18,659,137.5000 | < 0.0001 |
| | | | D = 0.1656 | < 0.0001 |
| 起訖時間 最小值 | 44.0944 (52.4930) | 46.4777 (67.4003) | t = 2.0458 | 0.0408 |
| | | | U = 14,833,672.0000 | < 0.0001 |
| | | | D = 0.0658 | < 0.0001 |
| 起訖時間 中位數 | 53.9737 (52.3601) | 65.6686 (69.7935) | t = 9.9413 | < 0.0001 |
| | | | U = 16,972,338.0000 | < 0.0001 |
| | | | D = 0.0683 | < 0.0001 |

在 Aspirin 使用情形中，案例組有 5,828 人 (34.3%) 使用，對照組則為 27,161 人 (29.4%)，使用率差異顯著 ($\chi^2 = 160.4422$, $P < 0.0001$; odds ratio = 1.2509, $P < 0.0001$)。劑量中位數在案例組高於對照組 (147.4550 mg vs. 126.8477 mg, $t = -13.9269$, $P < 0.0001$)，但使用次數較低 (2.4268 次 vs. 3.6759 次, $t = -31.1481$, $P < 0.0001$)、最大劑量較高 (181.9921 mg vs. 168.1492 mg, $t = -7.8714$, $P < 0.0001$)，且用藥時間平均 (64.7423 h vs. 96.1200 h, $t = 29.3441$, $P < 0.0001$)、最大值 (97.9961 h vs. 175.4506 h, $t = 38.4006$, $P < 0.0001$) 與中位數 (60.2716 h vs. 85.2924 h, $t = 24.4046$, $P < 0.0001$) 皆顯著不同，顯示案例組劑量分布較為集中且用藥時間較短。

在 Warfarin 使用上，案例組有 1,631 人 (9.6%) 使用，對照組為 8,371 人 (9.1%)，差異具有邊際顯著性 ($\chi^2 = 4.7433$, $P = 0.0294$; odds ratio = 1.0639, $P = 0.0299$)。雖然劑量中位數 (3.9720 mg vs. 3.9098 mg, $t = -1.2585$, $P = 0.2083$) 與平均劑量 (3.9762 mg vs. 3.9258 mg, $t = -1.0827$, $P = 0.2790$) 無顯著差異，案例組使用次數顯著較少 (5.2579 次 vs. 13.0950 次, $t = -27.1609$, $P < 0.0001$)，但用藥時間平均 (27.2577 h vs. 28.8035 h, $t = 2.6443$, $P = 0.0082$)、最大值 (46.7055 h vs. 68.6021 h, $t = 16.4972$, $P < 0.0001$) 與最小值 (13.7450 h vs. 9.4356 h, $t = -7.9837$, $P < 0.0001$) 皆顯著差異，顯示時間變異性在兩組間亦有落差。

Clopidogrel 部分，案例組有 1,416 人 (8.3%) 使用，對照組為 6,762 人 (7.3%)，使用率差異顯著 ($\chi^2 = 20.8520$, $P < 0.0001$; odds ratio = 1.1493, $P < 0.0001$)。案例組中位劑量稍高 (93.3317 mg vs. 87.5132 mg, $t = -3.0829$, $P = 0.0021$)，使用次數較少 (2.1476 次 vs. 3.4089 次, $t = -18.3226$, $P < 0.0001$)；用藥時間平均 (54.3857 h vs. 73.9742 h, $t = 10.9578$, $P < 0.0001$)、最大值 (78.5949 h vs. 135.3460 h, $t = 17.7619$, $P < 0.0001$) 與中位數 (51.1585 h vs. 65.6328 h, $t = 7.2681$, $P < 0.0001$) 均顯著下降，顯示案例組用藥時間集中度較高。

在 Apixaban 中，案例組有 942 人 (5.5%) 使用，對照組為 2,023 人 (2.2%)，使用率差異顯著 ($\chi^2 = 610.1430$, $P < 0.0001$; odds ratio = 2.6176, $P < 0.0001$)。雖然劑量中位數無顯著差異 (4.9666 mg vs. 4.8195 mg, $t = -1.9132$, $P = 0.0558$)，案例組使用次數較少 (1.9565 次 vs. 3.2399 次, $t = -13.6062$, $P < 0.0001$)；用藥時間平均 (50.4251 h vs. 66.6667 h, $t = 6.8247$, $P < 0.0001$)、最大值 (69.9595 h vs. 119.3800 h, $t = 12.6182$, $P < 0.0001$) 與中位數 (47.9137 h vs. 59.6093 h, $t = 5.3029$, $P < 0.0001$) 皆顯著較低，顯示案例組用藥時間較短且集中。

Rivaroxaban 使用率在案例組 492 人 (2.9%)，對照組 1,238 人 (1.3%) ($\chi^2 = 222.1775$, $P < 0.0001$; odds ratio = 2.1921, $P < 0.0001$)。劑量中位數 (17.7817 mg vs. 17.8100 mg, $t = 0.1756$, $P = 0.8606$) 與平均值 (17.7626 mg vs. 17.7642 mg, $t = 0.0105$, $P > 0.9900$) 無差異；使用次數較少 (1.7480 次 vs. 2.9512 次, $t = -10.4902$, $P < 0.0001$)；用藥時間平均 (39.4402 h vs. 65.2929 h, $t = 9.2729$, $P <$

0.0001)、最大值 (53.7318 h vs. 109.3394 h, $t = 11.2615$, $P < 0.0001$) 與中位數 (37.7835 h vs. 59.4309 h, $t = 7.9380$, $P < 0.0001$) 均顯著較低。

Dabigatran etexilate 部分, 案例組有 409 人(0.4%)使用, 對照組 86 人(0.5%), 兩者使用率無顯著差異 ($\chi^2 = 1.2530$, $P = 0.2630$; odds ratio = 1.1423, $P = 0.2632$)。劑量中位數 (139.1687 mg vs. 140.4070 mg, $t = 0.4088$, $P = 0.6828$) 與最大值 (140.6357 mg vs. 143.0233 mg, $t = 0.8307$, $P = 0.4066$) 皆無顯著差異；使用次數較少 (1.9169 次 vs. 2.8837 次, $t = -4.4442$, $P < 0.0001$)；用藥時間平均 (39.2996 h vs. 57.1529 h, $t = 3.8934$, $P = 0.0001$)、最大值 (54.0856 h vs. 92.4302 h, $t = 5.3668$, $P < 0.0001$) 與中位數 (37.2958 h vs. 51.5233 h, $t = 3.1270$, $P = 0.0019$) 皆顯著較短。

Cilostazol 中, 案例組有 148 人 (0.2%) 使用, 對照組 79 人 (0.5%) ($\chi^2 = 64.1559$, $P < 0.0001$; odds ratio = 2.9068, $P < 0.0001$)。劑量中位數 (89.6959 mg vs. 84.9684 mg, $t = -1.5774$, $P = 0.1161$) 與最大值 (91.7230 mg vs. 86.7089 mg, $t = -1.7373$, $P = 0.0837$) 無顯著差異；使用次數較少 (1.9392 次 vs. 3.1392 次, $t = -2.5533$, $P = 0.0113$)；用藥時間平均 (67.6606 h vs. 99.5080 h, $t = 3.0086$, $P = 0.0029$)、最大值 (93.3784 h vs. 162.8734 h, $t = 3.6638$, $P = 0.0003$) 與中位數 (69.5474 h vs. 93.0411 h, $t = 2.7335$, $P = 0.0068$) 皆顯著較短。

最後在 Enoxaparin 分析中, 案例組有 2,987 人 (17.6%) 使用, 對照組 10,451 人 (11.3%) ($\chi^2 = 519.4850$, $P < 0.0001$; odds ratio = 1.6692, $P < 0.0001$)。案例組劑量中位數較低 (52.7524 mg vs. 54.8380 mg, $t = 4.0743$, $P < 0.0001$)、使用次數較少 (1.7679 次 vs. 2.5193 次, $t = -18.2255$, $P < 0.0001$)、最大劑量較低 (54.8950 mg vs. 58.5002 mg, $t = 6.5160$, $P < 0.0001$)；用藥時間平均 (55.5369 h vs. 70.5761 h, $t = 12.5386$, $P < 0.0001$)、最大值 (70.7304 h vs. 111.2805 h, $t = 14.2641$, $P < 0.0001$) 與中位數 (53.9737 h vs. 65.6686 h, $t = 9.9413$, $P < 0.0001$) 亦顯著縮短。

綜合上述結果可見, 所有心血管用藥在案例組相較於對照組均呈現較高的使用率與用藥次數, 並在多數劑量及用藥時間指標上顯示更大的離散度與延長趨勢, 這些差異在統計檢定中均達到顯著, 表示嚴重型精神疾病患者在出血性中風預防與管理中, 心血管藥物的使用模式存在顯著差異。

4.4.3 生存分析結果

在生存分析結果中, 採用 Kaplan-Meier 估計案例組與對照組之存活函數, 將兩組存活曲線並置比較。其中 Kaplan-Meier 圖設定的藍色階梯線代表案例組 (case), 橙色階梯線代表對照組 (control), 則 95% 信賴區間以陰影區域標示, 以天數為橫軸、累積存活率為縱軸, 接著是解構對數秩檢定圖的設定, 圖中是以針對每個時間點, 分別計算卡方統計量與 P 值, 以揭示兩組之間在不同時間段的顯著性差異, 以天數為橫軸、卡方值為縱軸, 如下圖 11 所示：

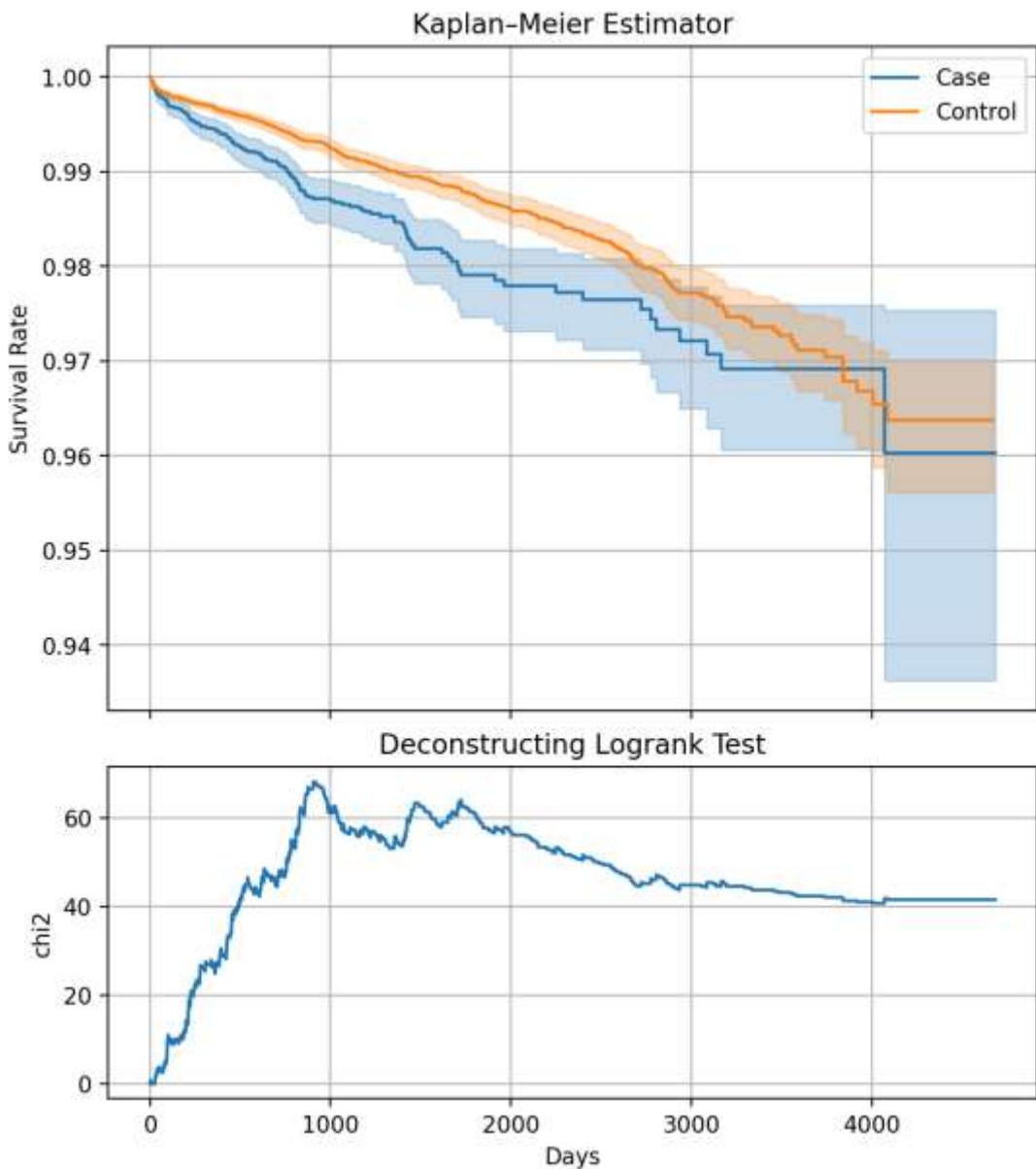


圖 11 案例組與對照組 Kaplan-Meier 存活曲線和解構對數秩檢定生存函數

從圖 11 上圖能發現對照組的生存率在初期與案例組重疊，但是來到大約 1000 天的時候，圖 11 的下圖中能發現卡方值正在開始往下降，這是因為案例組的生存率與卡方值的累計降了下來，所以案例組與對照組的生存曲線開始逐漸拉開距離，接著大概到了 1500 天之後，案例組的累計變得更慢了，則對照組幾乎是一直維持固定斜率，此時的卡方值則開始微微往上升，直到大概 2000 天之後，案例組下降的更緩慢並與對照組繼續拉開距離，但計算卡方值的部分還是持續累計，這時的卡方值又繼續往下降，不過這些卡方值都有超過統計顯著。綜合上述來看，對照組累積數率沒有太大的變化，但案例組累計則是逐漸變得緩慢，這表示案例

組的危機事件都比較快發生，所以當累計開始變慢的時候，卡方值則開始往下降，這是因為對照組都沒有太大的變化所造成的结果。

接著，可以透過 Cox 比例風險模型所產生的危險比(Hazard Ratio)與 ANOVA 分析，深入探討二元與數值型共變因對出血型中風對照組診斷前三診斷排除結果，事件發生風險的影響，並將 Cox 比例風險模型與 ANOVA 所產生的結果，以下圖 12 呈現：

| covariate | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq_bool | F_bool | PR(>F)_bool |
|--------------------------------|-----------|---------------------|---------------------|----------|-------------|-------------|-------------|
| gender | 1.518291 | 1.306813 | 1.763992 | < 0.0001 | 0.050970 | 7.982876 | 0.004723 |
| age | 1.037651 | 1.031948 | 1.043386 | < 0.0001 | 0.183484 | 28.737010 | < 0.0001 |
| with_psychosis | 0.872049 | 0.729552 | 1.042379 | 0.132578 | 0.015595 | 2.442460 | 0.118094 |
| with_hypertension | 1.395849 | 1.122724 | 1.735416 | 0.002683 | 0.141071 | 22.094450 | < 0.0001 |
| with_heart_type_disease | 1.177358 | 0.985027 | 1.407243 | 0.072784 | 0.159421 | 24.968297 | < 0.0001 |
| with_neurological_type_disease | 9.800551 | 8.351960 | 11.500390 | < 0.0001 | 9.351088 | 1464.557367 | < 0.0001 |
| with_diabetes | 0.937658 | 0.794222 | 1.106997 | 0.447301 | < 0.0001 | 0.008157 | 0.928037 |
| with_hyperlipidemia | 0.825612 | 0.696073 | 0.979259 | 0.027760 | 0.016811 | 2.632967 | 0.104669 |

| covariate | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq_time | F_time | PR(>F)_time |
|---------------------------------|-----------|---------------------|---------------------|----------|-------------|------------|-------------|
| gender | 1.502079 | 1.294334 | 1.743166 | < 0.0001 | 0.059314 | 9.202846 | 0.002417 |
| age | 1.050617 | 1.045424 | 1.055836 | < 0.0001 | 1.263664 | 196.061803 | < 0.0001 |
| with_psychosis | 1.623199 | 1.355656 | 1.943543 | < 0.0001 | 0.024008 | 3.724931 | 0.053608 |
| hypertension_times | 0.949195 | 0.926272 | 0.972686 | < 0.0001 | 0.010261 | 1.592096 | 0.207030 |
| heart_type_disease_times | 0.997647 | 0.986075 | 1.009355 | 0.692294 | 0.039474 | 6.124464 | 0.013334 |
| neurological_type_disease_times | 1.077312 | 1.064950 | 1.089818 | < 0.0001 | 2.923088 | 453.527187 | < 0.0001 |
| diabetes_times | 1.018636 | 1.004823 | 1.032640 | 0.008035 | 0.000157 | 0.024305 | 0.876113 |
| hyperlipidemia_times | 0.952589 | 0.917614 | 0.988897 | 0.010929 | 0.000502 | 0.077874 | 0.780199 |

圖 12 二元與數值型共變因的風險比網頁結果

在二元共變因模型中，性別顯著增加風險($HR = 1.5183$, 95% CI: $1.3068 \sim 1.7640$, $p < 0.0001$)，年齡每增加一歲亦顯著提升風險 ($HR = 1.0377$, 95% CI : $1.0319 \sim 1.0434$, $p < 0.0001$)。患有嚴重型精神疾病與否對風險影響未達顯著($HR = 0.8720$, 95% CI : $0.7296 \sim 1.0424$, $p = 0.1326$)，高血壓共病顯著增加風險 ($HR = 1.3958$, 95% CI : $1.1227 \sim 1.7354$, $p = 0.0027$)，而心臟類型疾病共病則未達顯著 ($HR = 1.1774$, 95% CI : $0.9850 \sim 1.4072$, $p = 0.0728$)。神經類型疾病共病對風險貢獻最大 ($HR = 9.8006$, 95% CI : $8.3520 \sim 11.5004$, $p < 0.0001$)，糖尿病共病對風險無顯著影響 ($HR = 0.9377$, 95% CI : $0.7942 \sim 1.1070$, $p = 0.4473$)，而高血脂共病則顯示輕微保護趨勢 ($HR = 0.8256$, 95% CI : $0.6961 \sim 0.9793$, $p = 0.0278$)。

ANOVA 結果顯示，性別對模型的貢獻達顯著 ($\text{sum_sq} = 0.0510$, $F = 7.9829$, $p = 0.0047$)，年齡 ($\text{sum_sq} = 0.1835$, $F = 28.7370$, $p < 0.0001$)、高血壓 (sum_sq

$= 0.1411$, $F = 22.0944$, $p < 0.0001$)、心臟類型疾病 ($\text{sum_sq} = 0.1594$, $F = 24.9683$, $p < 0.0001$) 及神經類型疾病 ($\text{sum_sq} = 9.3511$, $F = 1464.5574$, $p < 0.0001$) 均對模型有高度顯著貢獻；嚴重型精神疾病 ($\text{sum_sq} = 0.0156$, $F = 2.4425$, $p = 0.1181$)、糖尿病 ($\text{sum_sq} = 0.0001$, $F = 0.0082$, $p = 0.9280$) 與高血脂 ($\text{sum_sq} = 0.0168$, $F = 2.6330$, $p = 0.1047$) 則未達顯著。

在數值型共變因模型中，年齡效應更為顯著 ($\text{HR} = 1.0506$, 95% CI : 1.0454 ~ 1.0558, $p < 0.0001$)，且女性相較男性風險顯著上升 ($\text{HR} = 1.5021$, 95% CI : 1.2943 ~ 1.7432, $p < 0.0001$)。嚴重型精神疾病次數顯著提升風險 ($\text{HR} = 1.6232$, 95% CI : 1.3557 ~ 1.9435, $p < 0.0001$)，而高血壓次數則呈輕微保護趨勢 ($\text{HR} = 0.9492$, 95% CI : 0.9263 ~ 0.9727, $p < 0.0001$)。心臟類型疾病次數對風險不具顯著性 ($\text{HR} = 0.9976$, 95% CI : 0.9861 ~ 1.0094, $p = 0.6923$)，神經類型疾病次數則持續累積風險 ($\text{HR} = 1.0773$, 95% CI : 1.0650 ~ 1.0898, $p < 0.0001$)，糖尿病次數亦微幅增加風險 ($\text{HR} = 1.0186$, 95% CI : 1.0048 ~ 1.0326, $p = 0.0080$)，而高血脂次數則未顯著 ($\text{HR} = 0.9526$, 95% CI : 0.9176 ~ 0.9889, $p = 0.0109$)。

ANOVA 分析表明，年齡 ($\text{sum_sq} = 1.2637$, $F = 196.0618$, $p < 0.0001$)、心臟類型疾病次數 ($\text{sum_sq} = 0.0395$, $F = 6.1245$, $p = 0.0133$) 及神經類型疾病次數 ($\text{sum_sq} = 2.9231$, $F = 453.5272$, $p < 0.0001$) 對模型具有顯著貢獻；嚴重型精神疾病次數 ($\text{sum_sq} = 0.0240$, $F = 3.7249$, $p = 0.0536$)、高血壓次數 ($\text{sum_sq} = 0.0103$, $F = 1.5921$, $p = 0.2070$)、糖尿病次數 ($\text{sum_sq} = 0.0002$, $F = 0.0243$, $p = 0.8761$) 及高血脂次數 ($\text{sum_sq} = 0.0005$, $F = 0.0779$, $p = 0.7802$) 則影響有限。

綜合上述結果，二元模型突顯了共病存在對出血性中風後存活風險的主要影響，數值模型則進一步揭示部分共病次數（特別是神經類型疾病與嚴重型精神疾病）對風險具有累加效應，提示臨床在管理此類患者時，除評估共病有無外，亦應關注共病頻次與累積負擔。

4.4.4 藥物的比例風險模型與ANOVA

在「藥物的比例風險模型」分析中，先以「二元型共變因藥物預測出血型中風的風險比（Hazard Ratio, HR；95% Confidence Interval, 95% CI）」為核心，探討缺血性中風患者在使用各類心血管用藥（作為共變因）後，嚴重型精神疾病（作為變因）之相對風險變化。隨後，依次檢視「使用次數」、「劑量與數值型指標（平均值、最大值、最小值、中位數）」以及「用藥起訖時間（平均值、最大值、最小值、中位數）」等 Cox 模型與 ANOVA 結果，全面呈現八種藥物（Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin）對出血性中風患者的風險影響，關於各項藥物預測出血型中風對照組診斷前三診斷排除的風險比與 ANOVA 詳細結果，請查閱附錄四，以下表 4.4（使用率、使用次數、（劑量平均值、最大值、最小值、中位數）、（用藥起訖時間平均值、最大值、最小值、中位數））呈現，二元型和數值型共變因藥物對預測出血性中風風險的影響結果（HR (95% CI) 欄位是正相關以字形正體表示、反相關以字形粗體表示、無相關以字形斜體表示）：

表 4.4 二元型共變因藥物對預測出血性中風風險的影響（使用率）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 0.857933 (0.717655 ~ 1.025632) 反相關 | 0.015948 / 2.498365 / 0.113967 |
| Warfarin | 0.873141 (0.730373 ~ 1.043816) 反相關 | 0.014303 / 2.240484 / 0.134442 |
| Clopidogrel | 0.863839 (0.722613 ~ 1.032666) 反相關 | 0.015747 / 2.466320 / 0.116313 |
| Apixaban | 0.888250 (0.743017 ~ 1.061872) 反相關 | 0.010294 / 1.612551 / 0.204136 |
| Rivaroxaban | 0.878077 (0.734580 ~ 1.049607) 反相關 | 0.013601 / 2.130281 / 0.144417 |
| Dabigatran etexilate | 0.871141 (0.728778 ~ 1.041313) 反相關 | 0.015577 / 2.439604 / 0.118309 |
| Cilostazol | 0.873646 (0.730902 ~ 1.044268) 反相關 | 0.014918 / 2.336434 / 0.126381 |
| Enoxaparin | 0.892494 (0.746505 ~ 1.067034) 反相關 | 0.013532 / 2.119345 / 0.145452 |

表 4.4 數值型共變因藥物對預測出血性中風風險的影響（使用次數）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.648219 (1.377086 ~ 1.972735) 正相關 | 0.020889 / 3.242603 / 0.071749 |
| Warfarin | 1.622241 (1.354769 ~ 1.942521) 正相關 | 0.024180 / 3.751602 / 0.052759 |
| Clopidogrel | 1.569737 (1.309169 ~ 1.882167) 正相關 | 0.021681 / 3.364580 / 0.066615 |
| Apixaban | 1.658125 (1.384743 ~ 1.985478) 正相關 | 0.030094 / 4.669865 / 0.030699 |
| Rivaroxaban | 1.630295 (1.361543 ~ 1.952095) 正相關 | 0.025800 / 4.003016 / 0.045421 |
| Dabigatran etexilate | 1.622995 (1.355465 ~ 1.943328) 正相關 | 0.024031 / 3.728505 / 0.053494 |
| Cilostazol | 1.626850 (1.358716 ~ 1.947899) 正相關 | 0.024151 / 3.747130 / 0.052901 |
| Enoxaparin | 1.622845 (1.354743 ~ 1.944003) 正相關 | 0.029294 / 4.545721 / 0.033003 |

表 4.4 數值型共變因藥物對預測出血性中風風險的影響（平均值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.621497 (1.354239 ~ 1.941497) 正相關 | 0.024303 / 3.770650 / 0.052162 |
| Warfarin | 1.637052 (1.367217 ~ 1.960142) 正相關 | 0.026580 / 4.125116 / 0.042254 |
| Clopidogrel | 1.622895 (1.355305 ~ 1.943319) 正相關 | 0.024484 / 3.798740 / 0.051294 |
| Apixaban | 1.653752 (1.381066 ~ 1.980279) 正相關 | 0.028670 / 4.448739 / 0.034929 |
| Rivaroxaban | 1.634308 (1.364951 ~ 1.956819) 正相關 | 0.026282 / 4.078000 / 0.043448 |
| Dabigatran etexilate | 1.623246 (1.355687 ~ 1.943612) 正相關 | 0.024067 / 3.734124 / 0.053314 |
| Cilostazol | 1.626177 (1.358136 ~ 1.947118) 正相關 | 0.024420 / 3.788840 / 0.051598 |
| Enoxaparin | 1.627954 (1.359519 ~ 1.949392) 正相關 | 0.024334 / 3.775551 / 0.052009 |

表 4.4 數值型共變因藥物對預測出血性中風風險的影響（最大值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.617122 (1.350772 ~ 1.935991) 正相關 | 0.023599 / 3.661489 / 0.055686 |
| Warfarin | 1.632188 (1.363199 ~ 1.954255) 正相關 | 0.025224 / 3.914223 / 0.047882 |
| Clopidogrel | 1.621425 (1.354130 ~ 1.941482) 正相關 | 0.024148 / 3.746646 / 0.052916 |
| Apixaban | 1.655332 (1.382411 ~ 1.982134) 正相關 | 0.029029 / 4.504459 / 0.033809 |
| Rivaroxaban | 1.634608 (1.365206 ~ 1.957171) 正相關 | 0.026340 / 4.086904 / 0.043219 |
| Dabigatran etexilate | 1.623194 (1.355645 ~ 1.943546) 正相關 | 0.024062 / 3.733349 / 0.053339 |
| Cilostazol | 1.626147 (1.358113 ~ 1.947081) 正相關 | 0.024413 / 3.787801 / 0.051630 |
| Enoxaparin | 1.628205 (1.359744 ~ 1.949668) 正相關 | 0.024527 / 3.805455 / 0.051088 |

表 4.4 數值型共變因藥物對預測出血性中風風險的影響（最小值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.623545 (1.355904 ~ 1.944015) 正相關 | 0.024262 / 3.764251 / 0.052362 |
| Warfarin | 1.646241 (1.374516 ~ 1.971683) 正相關 | 0.028107 / 4.362224 / 0.036747 |
| Clopidogrel | 1.621855 (1.354421 ~ 1.942095) 正相關 | 0.024400 / 3.785692 / 0.051695 |
| Apixaban | 1.650190 (1.378068 ~ 1.976046) 正相關 | 0.028010 / 4.346276 / 0.037092 |
| Rivaroxaban | 1.633825 (1.364544 ~ 1.956248) 正相關 | 0.026172 / 4.060848 / 0.043891 |
| Dabigatran etexilate | 1.623299 (1.355729 ~ 1.943677) 正相關 | 0.024070 / 3.734550 / 0.053301 |
| Cilostazol | 1.626129 (1.358090 ~ 1.947069) 正相關 | 0.024413 / 3.787827 / 0.051629 |
| Enoxaparin | 1.627389 (1.358984 ~ 1.948804) 正相關 | 0.024208 / 3.755858 / 0.052625 |

表 4.4 數值型共變因藥物對預測出血性中風風險的影響（中位數）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.623609 (1.355926 ~ 1.944136) 正相關 | 0.024589 / 3.815111 / 0.050795 |
| Warfarin | 1.638707 (1.368614 ~ 1.962103) 正相關 | 0.026551 / 4.120618 / 0.042366 |
| Clopidogrel | 1.624522 (1.356645 ~ 1.945292) 正相關 | 0.024638 / 3.822802 / 0.050562 |
| Apixaban | 1.653724 (1.381042 ~ 1.980246) 正相關 | 0.028694 / 4.452438 / 0.034854 |
| Rivaroxaban | 1.634156 (1.364822 ~ 1.956640) 正相關 | 0.026280 / 4.077634 / 0.043457 |
| Dabigatran etexilate | 1.623246 (1.355686 ~ 1.943612) 正相關 | 0.024070 / 3.734545 / 0.053301 |
| Cilostazol | 1.626194 (1.358149 ~ 1.947140) 正相關 | 0.024419 / 3.788749 / 0.051601 |
| Enoxaparin | 1.627819 (1.359418 ~ 1.949214) 正相關 | 0.024365 / 3.780323 / 0.051861 |

表 4.4 數值型共變因藥物對預測出血性中風風險的影響（起訖時間平均值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.617605 (1.349637 ~ 1.938777) 正相關 | 0.024837 / 3.853527 / 0.049644 |
| Warfarin | 1.626727 (1.358566 ~ 1.947818) 正相關 | 0.025122 / 3.898438 / 0.048334 |
| Clopidogrel | 1.622750 (1.355254 ~ 1.943043) 正相關 | 0.023676 / 3.673368 / 0.055291 |
| Apixaban | 1.652830 (1.380211 ~ 1.979296) 正相關 | 0.028738 / 4.459272 / 0.034715 |
| Rivaroxaban | 1.633923 (1.364574 ~ 1.956439) 正相關 | 0.026326 / 4.084722 / 0.043275 |
| Dabigatran etexilate | 1.622443 (1.355002 ~ 1.942670) 正相關 | 0.023797 / 3.692329 / 0.054666 |
| Cilostazol | 1.627494 (1.359257 ~ 1.948665) 正相關 | 0.024726 / 3.836400 / 0.050154 |
| Enoxaparin | 1.643668 (1.372494 ~ 1.968420) 正相關 | 0.026784 / 4.155674 / 0.041498 |

表 4.4 數值型共變因藥物對預測出血性中風風險的影響（起訖時間最大值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.634782 (1.363897 ~ 1.959467) 正相關 | 0.028310 / 4.392600 / 0.036098 |
| Warfarin | 1.621930 (1.354631 ~ 1.941974) 正相關 | 0.023754 / 3.685733 / 0.054882 |
| Clopidogrel | 1.621842 (1.354461 ~ 1.942006) 正相關 | 0.024396 / 3.785161 / 0.051711 |
| Apixaban | 1.658004 (1.384603 ~ 1.985390) 正相關 | 0.030145 / 4.677763 / 0.030558 |
| Rivaroxaban | 1.634400 (1.364974 ~ 1.957007) 正相關 | 0.026711 / 4.144436 / 0.041774 |
| Dabigatran etexilate | 1.622731 (1.355244 ~ 1.943011) 正相關 | 0.023876 / 3.704422 / 0.054271 |
| Cilostazol | 1.627412 (1.359187 ~ 1.948568) 正相關 | 0.024651 / 3.824825 / 0.050501 |
| Enoxaparin | 1.648287 (1.376388 ~ 1.973898) 正相關 | 0.026959 / 4.182877 / 0.040837 |

表 4.4 數值型共變因藥物對預測出血性中風風險的影響（起訖時間最小值）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.615216 (1.348660 ~ 1.934457) 正相關 | 0.023269 / 3.610257 / 0.057427 |
| Warfarin | 1.631939 (1.362829 ~ 1.954188) 正相關 | 0.025896 / 4.018327 / 0.045011 |
| Clopidogrel | 1.621384 (1.354002 ~ 1.941568) 正相關 | 0.023984 / 3.721479 / 0.053719 |
| Apixaban | 1.632323 (1.363142 ~ 1.954661) 正相關 | 0.025150 / 3.902105 / 0.048228 |
| Rivaroxaban | 1.629008 (1.360460 ~ 1.950567) 正相關 | 0.025072 / 3.889963 / 0.048578 |
| Dabigatran etexilate | 1.622643 (1.355184 ~ 1.942888) 正相關 | 0.023811 / 3.694581 / 0.054592 |
| Cilostazol | 1.626946 (1.358786 ~ 1.948029) 正相關 | 0.024454 / 3.794087 / 0.051436 |
| Enoxaparin | 1.630764 (1.361810 ~ 1.952835) 正相關 | 0.024585 / 3.814437 / 0.050815 |

表 4.4 數值型共變因藥物對預測出血性中風風險的影響（起訖時間中位數）

| 藥物（共變因） | 嚴重型精神疾病變因 | |
|----------------------|------------------------------------|--------------------------------|
| | HR (95% CI) 正/反/無 相關 | sum_sq / F / P 值 |
| Aspirin | 1.614795 (1.347535 ~ 1.935062) 正相關 | 0.024064 / 3.733549 / 0.053333 |
| Warfarin | 1.628709 (1.360173 ~ 1.950262) 正相關 | 0.025458 / 3.950650 / 0.046856 |
| Clopidogrel | 1.622340 (1.354887 ~ 1.942588) 正相關 | 0.023607 / 3.662766 / 0.055644 |
| Apixaban | 1.649646 (1.377547 ~ 1.975491) 正相關 | 0.027972 / 4.340318 / 0.037222 |
| Rivaroxaban | 1.633094 (1.363878 ~ 1.955451) 正相關 | 0.026063 / 4.043847 / 0.044335 |
| Dabigatran etexilate | 1.622640 (1.355171 ~ 1.942898) 正相關 | 0.023816 / 3.695141 / 0.054574 |
| Cilostazol | 1.627544 (1.359297 ~ 1.948727) 正相關 | 0.024700 / 3.832275 / 0.050277 |
| Enoxaparin | 1.641476 (1.370683 ~ 1.965767) 正相關 | 0.026233 / 4.070137 / 0.043650 |

在二元型共變因模型中（附錄五），以「使用率」作為主要指標，檢視八種心血管用藥對嚴重型精神疾病患者出血性中風風險的影響。各藥物之相對風險比（HR）介於 0.8579 ~ 0.8925，95% CI 範圍為 0.7177 ~ 1.0670，均呈現反相關趨勢，但因信賴區間多跨越 1，顯示統計上尚未顯著；ANOVA 結果 sum_sq/F/P 欄位值分別介於 0.0103 ~ 0.0159/1.6126 ~ 2.4984/0.1139 ~ 0.2041，亦皆未達顯著水準，顯示「是否使用藥物」雖具保護性傾向，但模型解釋力有限。

在數值型共變因（使用次數）模型中，八種藥物 HR 值介於 1.5697 ~ 1.6581，95% CI 範圍為 1.3092 ~ 1.9855，整體呈正向相關；ANOVA 結果 sum_sq/F/P 欄位值介於 0.0209 ~ 0.0301/3.2426 ~ 4.6699/0.0307 ~ 0.0717，其中 Apixaban、Rivaroxaban 及 Enoxaparin 之 P 值低於 0.05，顯示用藥次數增加對某些藥物具有顯著風險預測能力，但其餘藥物則未達顯著，表示整體解釋力亦有限（附錄五）。

在以劑量（平均值、最大值、最小值、中位數）及用藥起訖時間（平均值、最大值、最小值、中位數）作為數值型共變因時，八種藥物 HR 範圍約為 1.6171 ~ 1.6483（劑量）與 1.6152 ~ 1.6437（時間），95% CI 大多未跨越 1；ANOVA 結果 sum_sq/F/P 欄位值落在 0.0233 ~ 0.0301/3.6103 ~ 4.6778/0.0347 ~ 0.0574，其中少數指標（如 Apixaban 劑量最大值、起訖時間平均值等）P 值略低於 0.05，但 ANOVA 整體亦多未達顯著，不過風險呈一致正向影響趨勢（附錄五）。

綜合上述各結果，僅在數值型共變因的部分指標顯示，用藥次數與用藥劑量和用藥時間具有顯著預測能力；然而，相較之下，「是否使用藥物」的反相關趨勢，雖然 ANOVA 未達顯著，卻在保護性傾向上一致且明確。因而，在本研究中，二元型共變因模型，仍為探究嚴重型精神疾病患者後續出血性中風風險時，相對具臨床意義且易於解釋的指標。

4.5 醫療數據表與 SQL 範例查詢網頁結果

在進行本次研究後，本人建立了一個網頁提供特定疾病和藥物相關的 MIMIC IV 2.1 數據表，旨在幫助大家更好地理解這些醫療數據集中的詳細資訊，以便進行類似的學術研究。大家可以使用選單切換到使用預設的 SQL 範例來查詢醫療資料，也能夠自行更改預設的 SQL 範例來查詢不同醫療資料結果。

4.5.1 疾病 SQL 範例查詢網頁

在使用網頁左邊選單時，選擇切換到疾病 SQL 範例來查詢醫療資料，能夠透過可查詢表 (Queryable Tables) 來決定需要查詢疾病相關醫療紀錄，以下圖 13 呈現：



The screenshot shows a web application interface for querying specific diseases. At the top, there's a header with a bar chart icon and the text "特定疾病的 SQL 查詢". Below it, a green banner displays a checkmark and the message "成功載入 13 張表格！". The main content area is titled "可查詢表" (Queryable Tables) and contains a table with 13 rows, each representing a table name and its record count.

| | Table Name | Record Count |
|----|------------------------------|--------------|
| 1 | mimiciv_hosp.admissions | 50000 |
| 2 | mimiciv_hosp.diagnoses_icd | 50000 |
| 3 | mimiciv_hosp.patients | 50000 |
| 4 | mimic_ed.diagnosis | 50000 |
| 5 | mimic_ed.edstays | 50000 |
| 6 | diabetes_icd_codes | 628 |
| 7 | heart_type_disease_icd_codes | 466 |
| 8 | hemorrhagic_stroke_icd_codes | 41 |
| 9 | hyperlipidemia_icd_codes | 32 |
| 10 | hypertension_icd_codes | 73 |

圖 13 相關疾病查詢表

在圖 13 當中能夠看到可查詢表的所有表名稱和對應的資料筆數，因為是範例能夠呈現的資料筆數有限，所以每個表儲存最大的資料筆數上限為 50000 筆，目前提供查詢疾病相關醫療紀錄表總共有 14 個，而這也對應著本篇研究主題所用到的相關疾病查詢方法。

接著在透過下方標籤選擇需要查詢的範例教學，以下圖 14 呈現：

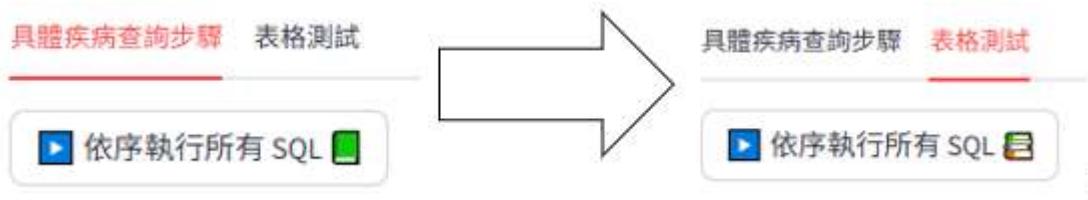


圖 14 相關疾病標籤選擇範例

在圖 14 當中能夠看到左邊標籤顯示是預設的具體疾病查詢步驟標籤頁面，但能夠透過選擇右邊的標籤來切換成表格測試標籤頁面。在選擇完標籤頁後，可以點選下方的依序執行所有 SQL 按鈕，來執行當下標籤頁所有的 SQL 範例，而關於 SQL 範例查詢可以透過附錄一查閱詳細的具體步驟，例如以步驟一來說執行完的結果會以下圖 15 的方式呈現：

A screenshot of a web-based database query results page. At the top left is a button labeled '執行SQL' (Execute SQL). Below it are two tabs: '數據輸出' (Data Output) and '訊息' (Messages), with '數據輸出' selected. The main area displays a table with 10 rows of data. The table has four columns: 'subject_id', 'admit_date', 'icd_code', and 'icd_version'. The data is as follows:

| | subject_id | admit_date | icd_code | icd_version |
|-----|------------|---------------------|----------|-------------|
| 1. | 10000032 | 2180-05-06 00:00:00 | V462 | 9 |
| 2. | 10000032 | 2180-06-26 00:00:00 | V462 | 9 |
| 3. | 10000032 | 2180-07-23 00:00:00 | V462 | 9 |
| 4. | 10000032 | 2180-08-05 00:00:00 | V462 | 9 |
| 5. | 10000032 | 2180-05-06 00:00:00 | 07054 | 9 |
| 6. | 10000032 | 2180-06-26 00:00:00 | 07054 | 9 |
| 7. | 10000032 | 2180-07-23 00:00:00 | 07054 | 9 |
| 8. | 10000032 | 2180-08-05 00:00:00 | 07054 | 9 |
| 9. | 10000032 | 2180-05-06 00:00:00 | 3051 | 9 |
| 10. | 10000032 | 2180-06-26 00:00:00 | 3051 | 9 |

圖 15 特定疾病的 SQL 範例查詢結果

在圖 15 當中能夠看到步驟一依序執行所有 SQL 的結果，當然也能夠透過圖 15 中左上角的執行 SQL 按鈕來進行單一範例的查詢結果，每個範例也都有單獨的執行 SQL 按鈕，讓每個步驟都能夠單一逐步執行與驗證查詢結果，其中結果所創建的新資料表也能夠被下一步的範例以 SQL 語法的方式讀取。

在執行完 SQL 結果後，也可以透過執行 SQL 按鈕下面的標籤來查看其他結果，而當前預設的顯示標籤頁是數據輸出，也就是當下步驟 SQL 查詢完的結果，如果點選訊息的標籤將會顯示當下 SQL 語法是否執行成功的訊息，如下 16 圖所示：



圖 16 特定疾病的 SQL 範例查詢結果訊息

4.5.2 藥物 SQL 範例查詢網頁

在使用網頁左邊選單時，選擇切換到藥物 SQL 範例來查詢醫療資料，能夠透過可查詢表 (Queryable Tables) 來決定需要查詢疾病相關醫療紀錄，以下圖 17 呈現：

| Table Name | Record Count |
|------------------------------|--------------|
| 1 mimiciv_hosp.prescriptions | 50000 |

圖 17 相關藥物查詢表

在圖 17 當中能夠看到可查詢表的所有表名稱和對應的資料筆數，因為是範例能夠呈現的資料筆數有限，所以每個表儲存最大的資料筆數上限為 50000 筆，目前提供查詢藥物相關醫療紀錄表只有 1 個，而這也對應著本篇研究主題所用到的相關藥物查詢方法。

接著在透過下方標籤選擇需要查詢的範例教學，以下圖 18 呈現：

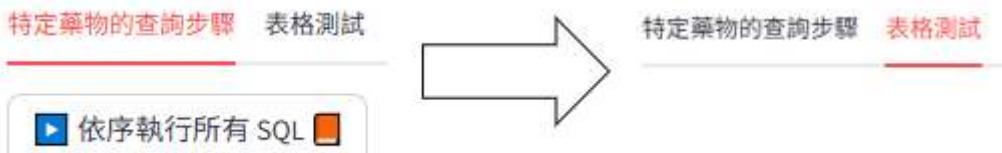


圖 18 相關藥物標籤選擇範例

在圖 18 當中能夠看到左邊標籤顯示是預設的特定藥物的查詢步驟標籤頁面，但能夠透過選擇右邊的標籤來切換成表格測試標籤頁面。在選擇完標籤頁後，可以點選下方的依序執行所有 SQL 按鈕，來執行當下標籤頁所有的 SQL 範例，而關於 SQL 範例查詢可以透過附錄一查閱詳細的具體步驟，例如以步驟一來說執行完的結果會以下圖 19 的方式呈現：

執行SQL

數據輸出 訊息

| | subject_id | drug | dose_val_rx | dose_unit_rx | starttime | stoptime |
|----|------------|-------------------|-------------|--------------|---------------------|---------------------|
| 1 | 10000117 | Enoxaparin Sodium | 40 | mg | 2183-09-18 21:00:00 | 2183-09-21 21:00:00 |
| 2 | 10000635 | Aspirin EC | 325 | mg | 2136-06-19 15:00:00 | 2136-06-20 16:00:00 |
| 3 | 10000764 | Aspirin | 81 | mg | 2132-10-18 08:00:00 | 2132-10-19 21:00:00 |
| 4 | 10000764 | Aspirin | 325 | mg | 2132-10-16 13:00:00 | 2132-10-17 12:00:00 |
| 5 | 10000764 | Clopidogrel | 75 | mg | 2132-10-18 08:00:00 | 2132-10-19 21:00:00 |
| 6 | 10000980 | Aspirin | 81 | mg | 2193-08-15 08:00:00 | 2193-08-17 19:00:00 |
| 7 | 10000980 | Aspirin | 81 | mg | 2190-11-07 12:00:00 | 2190-11-08 20:00:00 |
| 8 | 10000980 | Aspirin | 81 | mg | 2190-11-07 08:00:00 | 2190-11-07 11:00:00 |
| 9 | 10000980 | Clopidogrel | 75 | mg | 2190-11-07 08:00:00 | 2190-11-07 11:00:00 |
| 10 | 10000980 | Clopidogrel | 75 | mg | 2190-11-07 12:00:00 | 2190-11-08 20:00:00 |

圖 19 特定藥物的 SQL 範例查詢結果

在圖 19 當中能夠看到步驟一依序執行所有 SQL 的結果，當然也能夠透過圖 19 中左上角的執行 SQL 按鈕來進行單一範例的查詢結果，每個範例也都有單獨的執行 SQL 按鈕，讓每個步驟都能夠單一逐步執行與驗證查詢結果，其中結果所創建的新資料表也能夠被下一步的範例以 SQL 語法的方式讀取。

在執行完 SQL 結果後，也可以透過執行 SQL 按鈕下面的標籤來查看其他結果，而當前預設的顯示標籤頁是數據輸出，也就是當下步驟 SQL 查詢完的結果，如果點選訊息的標籤將會顯示當下 SQL 語法是否執行成功的訊息，如下 20 圖所示：

數據輸出 訊息

CREATE complete: Table temp_one created.

SELECT complete: Query executed successfully.

圖 20 特定藥物的 SQL 範例查詢結果訊息

五、結論

在缺血型中風事件的分析中，案例組與對照組在基本資訊（年齡、性別）及主要共病（高血壓、心臟類型疾病、神經類型疾病、糖尿病、高血脂等）上皆呈顯著差異，且嚴重型精神疾病患者的共病累積負擔更為嚴重。進行藥物獨立性檢定時，發現案例組在八種心血管用藥的使用率、用藥次數、劑量及用藥時間等指標，均顯著高於對照組。生存分析採用 Kaplan-Meier 曲線與解構式對數秩檢定，顯示案例組早期存活率略低，但隨追蹤時間延長，其存活曲線下降趨勢顯著緩和；Cox 比例風險模型將「是否使用藥物」設為二元共變因時，大多數藥物的危險比未達顯著差異，反映出純粹用藥與否對預後的影響有限；而若以用藥次數、劑量或起訖時間作為數值型共變因，雖多呈正相關趨勢，但 ANOVA 分析顯示這些指標對模型的解釋力雖達統計顯著，仍不及二元用藥指標的穩健性。

在出血型中風事件的分析中，同樣觀察到案例組與對照組在基本資訊與共病分布上的顯著差異，且案例組的心血管藥物使用模式更為集中、用藥時間更長。獨立性檢定確認各項用藥指標於案例組均顯著高於對照組；Kaplan-Meier 曲線與解構式對數秩檢定揭示兩組初期存活率相近，但隨追蹤拉開，案例組長期風險顯著偏高。Cox 比例風險模型中，「是否使用藥物」的二元共變因大多呈顯著保護性效應，顯示單一用藥與否仍具解釋力；而數值型共變因（次數、劑量、時長）多數呈正相關，但 ANOVA 結果僅部分指標在 F 值上具統計顯著，突顯細節性用藥指標對臨床預後的額外解釋有限。

針對對照組前三診斷排除後的缺血型與出血型中風結果，再次驗證前述結論：年齡、性別及主要共病依然為風險評估的核心；在藥物比例風險模型中，「是否使用藥物」的二元共變因效果穩健，即使剔除潛在混雜診斷後，多數藥物仍呈保護性或無顯著效應；而以用藥次數、劑量及起訖時間為數值型共變因時，雖對 HR 呈現一致正相關，但 ANOVA 分析再度顯示其對模型的貢獻有限。此設計有效排除了因中風事件導致的診斷偏倚，使得研究結果更具可靠性與透明度。

綜合各組別之研究結果可見，在嚴重型精神疾病患者的缺血性及出血性中風預防與管理中，二元「是否用藥」指標較細分至用藥次數、劑量或時間的數值型指標，對存活與併發風險的解釋更為直接且穩健。未來可擴展至不同藥物的異質性效果比較，並結合更豐富的電子病歷資料，以優化風險評估模型並提升臨床決策的精準度與個別化管理。

本次研究，除了在臨床統計分析方法上，提供一套可重現且具透明度的操作框架外，亦建立了一個包含特定疾病與藥物 SQL 查詢範例的網頁平台，為跨領域研究者在公開資料庫上的資料檢索與分析提供了技術支援與實務參考。此平台不僅便於研究者快速查詢特定診斷與藥物資料，還能藉由範例教學強化對 MIMIC-IV 資料庫結構與查詢邏輯的理解，為後續相關研究注入更高效率與準確性。

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附錄一

詳細 SQL 查詢語法，本附錄提供研究中主要 SQL 查詢程式碼範例，請依照實際資料表結構與欄位名稱調整。篩選特定疾病查詢分為 1 到 23 步，這次範例是使用 psychosis & ischemic stroke 和 psychosis & hemorrhagic stroke 為主軸的篩選。而篩選特定藥物查詢，則是接續在特定疾病範例後面，步驟分為 1 到 7 步，這次藥物範例是使用針對此主題疾病，篩選出來的八種特定藥物為主軸，最後將主題疾病與特定藥物資料集，透過 subject_id 欄位使用 SQL 進行左外部合併即可拿到本次研究的主題資料。(資料來源：<https://mimic.mit.edu/docs/iv/>)

一、特定疾病查詢

步驟 1

使用 NATURAL JOIN 來組合 hosp (diagnoses_icd, admissions)。# 產生完整的 hosp 表（未對 ID 進行重複資料刪除）。

```
DROP TABLE IF EXISTS temp_one;
CREATE TEMP TABLE temp_one AS
SELECT subject_id, DATE(admittime) AS admit_date, icd_code, icd_version
FROM mimiciv_hosp.diagnoses_icd
NATURAL JOIN mimiciv_hosp.admissions;
SELECT * FROM temp_one;
```

第 2 步

使用 DISTINCT 過濾掉重複的 subject_id。# 將 hosp 的 subject_id 儲存到 temp_two（提取所需的 ID）。

```
DROP TABLE IF EXISTS temp_two;
CREATE TEMP TABLE temp_two AS
SELECT DISTINCT subject_id
FROM temp_one;
SELECT * FROM temp_two;
```

第 3 步

使用 NATURAL JOIN 來組合 ed (diagnosis, edstays)。# 產生完整的 ed 表（ID 未重複資料刪除）。

```
DROP TABLE IF EXISTS temp_three;
CREATE TEMP TABLE temp_three AS
SELECT subject_id, DATE(intime) AS admit_date, icd_code, icd_version
FROM mimic_ed.diagnosis
NATURAL JOIN mimic_ed.edstays;
SELECT * FROM temp_three;
```

第4步

使用 temp_two (hosp) 的 subject_id 作為 temp_three (ed) 的查詢條件。# 在 ed 中尋找與 hosp 中具有相同 subject_id 的物件。

```
DROP TABLE IF EXISTS temp_four;
CREATE TABLE temp_four AS
SELECT * FROM temp_three
WHERE subject_id IN (SELECT subject_id FROM temp_two);
SELECT * FROM temp_four;
```

第5步

使用 UNION ALL 合併 temp_one (hosp) + temp_four (ed)。# 產生完整的組合 hosp + ed 表 (ID 未重複資料刪除)。

```
DROP TABLE IF EXISTS temp_five;
CREATE TABLE temp_five AS
SELECT * FROM temp_one
UNION ALL
SELECT * FROM temp_four;
SELECT * FROM temp_five;
```

第6步

1. 使用 psychosis_icd_codes 查詢 temp_five (case) 中患有精神病的患者的記錄。
2. 使用 GROUP BY subject_id 將記錄分組，確保沒有重複的 subject_id。
3. 使用 MIN(admit_date) 找出最早的入學日期。

```
DROP TABLE IF EXISTS temp_six;
CREATE TABLE temp_six AS
SELECT subject_id, MIN(admit_date) AS index_date
FROM (
SELECT * FROM temp_five
WHERE (icd_version = 10
AND icd_code IN (SELECT icd_code FROM psychosis_icd_codes WHERE icd_version = 10))
OR (icd_version = 9
AND icd_code IN (SELECT icd_code FROM psychosis_icd_codes WHERE icd_version = 9)))
) AS all_diagnoses
GROUP BY subject_id;
SELECT * FROM temp_six;
```

第 7 步

1. 使用 GROUP BY subject_id 將記錄分組，並確保沒有重複的 subject_id。
2. 使用 MIN(admit_date) 找出最早的大學日期。
3. 執行 DELETE FROM 指令以刪除所有與精神疾病相關的病患紀錄。

```
DROP TABLE IF EXISTS temp_seven;
CREATE TABLE temp_seven AS
SELECT subject_id, MIN(admit_date) AS index_date
FROM temp_five
GROUP BY subject_id;
DELETE FROM temp_seven
WHERE subject_id IN (SELECT subject_id FROM temp_six);
SELECT * FROM temp_seven;
DELETE FROM temp_seven
WHERE subject_id IN (
SELECT DISTINCT subject_id
FROM temp_five
WHERE (icd_version = 10
AND icd_code IN (
SELECT icd_code
FROM all_psychiatric_disorders_icd_codes
WHERE icd_version = 10))
OR (icd_version = 9
AND icd_code IN (
SELECT icd_code
FROM all_psychiatric_disorders_icd_codes
WHERE icd_version = 9)));

```

第 8 步

1. 使用 SELECT *, 'TRUE' AS with_psychosis 新增一個值為 TRUE 的 with_psychosis 欄位（用於病例組）。
2. 使用 SELECT *, 'FALSE' AS with_psychosis 新增值為 FALSE 的 with_psychosis 欄位（用於控制群組）。
3. 使用 UNION ALL 合併 hosp + ed。

```
DROP TABLE IF EXISTS temp_eight;
CREATE TEMP TABLE temp_eight AS
SELECT *, 'TRUE' AS with_psychosis FROM temp_six
UNION ALL
SELECT *, 'FALSE' AS with_psychosis FROM temp_seven;
SELECT * FROM temp_eight;
```

第9步

1. 使用 GROUP BY subject_id 將記錄分組，並確保沒有重複的 subject_id。
2. 使用 MAX(admit_date) 找出最後入院日期。
3. 使用 DELETE FROM 刪除精神病為 TRUE 且最早入院日期等於最後入院日期的紀錄。

```
DROP TABLE IF EXISTS temp_nine;
CREATE TABLE temp_nine AS
SELECT subject_id, MAX(admit_date) AS last_date
FROM temp_five
GROUP BY subject_id;
DELETE FROM temp_eight
WHERE subject_id IN (
SELECT temp_eight.subject_id
FROM temp_eight
JOIN temp_nine
ON temp_eight.subject_id = temp_nine.subject_id
WHERE temp_nine.last_date = temp_eight.index_date
AND temp_eight.with_psychosis = 'TRUE');
DROP TABLE IF EXISTS temp_nine;
CREATE TABLE temp_nine AS
SELECT * FROM temp_eight;
SELECT * FROM temp_nine;
```

第10步

1. 使用 ischemic_stroke_icd_codes 查詢 temp_five (全部) 中缺血性中風患者的記錄。
2. 使用 GROUP BY subject_id 將記錄分組，確保沒有重複的 subject_id。
3. 使用 MIN(admit_date) 找出最早的入學日期。

```
DROP TABLE IF EXISTS temp_ten;
CREATE TABLE temp_ten AS
SELECT subject_id, MIN(admit_date) AS first_date_ischemic_stroke
FROM (
SELECT * FROM temp_five
WHERE (icd_version = 10
AND icd_code IN (SELECT icd_code FROM ischemic_stroke_icd_codes WHERE icd_version = 10))
OR (icd_version = 9
AND icd_code IN (SELECT icd_code FROM ischemic_stroke_icd_codes WHERE icd_version = 9)))
) AS all_diagnoses_first_date_ischemic_stroke
GROUP BY subject_id;
SELECT * FROM temp_ten;
```

第十步要選擇使用 ischemic_stroke_icd_codes 或 hemorrhagic_stroke_icd_codes 想要獲得 psychosis & hemorrhagic stroke 為主軸的篩選，只需要更改第十步的主軸即可。

第 11 步

1. 使用 CREATE TABLE 從 temp_nine 匯入資料來建立表 temp_eleven。
2. 使用 DELETE FROM temp_nine 刪除最早入院日期等於缺血性中風最早入院日期的紀錄。

```
DROP TABLE IF EXISTS temp_eleven;
CREATE TABLE temp_eleven AS
SELECT * FROM temp_nine;
DELETE FROM temp_eleven
WHERE subject_id IN (
SELECT temp_eleven.subject_id
FROM temp_eleven
JOIN temp_ten
ON temp_eleven.subject_id = temp_ten.subject_id
WHERE temp_ten.first_date_ischemic_stroke = temp_eleven.index_date);
SELECT * FROM temp_eleven;
```

第 12 步

1. 使用 temp_eleven 中的 ID 欄位從 temp_ten 取得具有符合 ID 且事件日期（第一次發生）最接近最早入院日期的紀錄。
2. 使用 LEFT JOIN 保留 temp_eleven 中的所有記錄；若沒有對應的 event_date，則顯示為 NULL。

```
DROP TABLE IF EXISTS temp_twelve;
CREATE TABLE temp_twelve AS
SELECT
temp_eleven.subject_id,
temp_eleven.with_psychosis,
temp_eleven.index_date,
IS_after_index_date.first_date_ischemic_stroke AS event_date
FROM temp_eleven
LEFT JOIN (
SELECT
temp_ten.subject_id,
temp_ten.first_date_ischemic_stroke
FROM temp_ten
JOIN temp_eleven ON temp_ten.subject_id = temp_eleven.subject_id
WHERE temp_ten.first_date_ischemic_stroke > temp_eleven.index_date
) AS IS_after_index_date
ON temp_eleven.subject_id = IS_after_index_date.subject_id;
SELECT * FROM temp_twelve;
```

第 13 步

檢查 event_date 列是否為 NULL；如果不是 NULL，則將新列 E 設為 TRUE，否則為 FALSE。

```
DROP TABLE IF EXISTS temp_thirteen;
CREATE TABLE temp_thirteen AS
SELECT *, CASE
WHEN event_date IS NOT NULL THEN 'TRUE'
ELSE 'FALSE' END AS "E"
FROM temp_twelve;
SELECT * FROM temp_thirteen;
```

第 14 步

1. 對於 temp_thirteen 中 event_date 為 NULL 的記錄，填寫患者的死亡日期。
2. 使用 UPDATE 將 temp_fourteen 中的 event_date 從 NULL 改為病患的 death_date。

```
DROP TABLE IF EXISTS temp_fourteen;
CREATE TABLE temp_fourteen AS
SELECT * FROM temp_thirteen;
UPDATE temp_fourteen
SET event_date = patients_death_date.death_date
FROM (
SELECT
mimiciv_hosp.patients.subject_id,
DATE(mimiciv_hosp.patients.dod) AS death_date
FROM mimiciv_hosp.patients
WHERE mimiciv_hosp.patients.dod IS NOT NULL
) patients_death_date
WHERE temp_fourteen.subject_id = patients_death_date.subject_id
AND temp_fourteen.event_date IS NULL;
SELECT * FROM temp_fourteen;
```

第 15 步

- 建立表格 temp_fifteen，其中包含每個 subject_id 的最新入學年份。
- 使用 UNION ALL 合併 hosp + ed。
- 使用 GROUP BY subject_id 將記錄分組，並確保沒有重複的 subject_id。

```
DROP TABLE IF EXISTS temp_fifteen;
CREATE TABLE temp_fifteen AS
SELECT
subject_id,
MAX(admit_year) AS admit_year
FROM (
SELECT subject_id, strftime('%Y', admittime) AS admit_year
FROM mimiciv_hosp.diagnoses_icd NATURAL JOIN mimiciv_hosp.admissions
UNION ALL
SELECT
subject_id,
strftime('%Y', intime) AS admit_year
FROM mimic_ed.diagnosis NATURAL JOIN mimic_ed.edstays
) AS all_diagnoses
GROUP BY subject_id;
SELECT * FROM temp_fifteen;
```

第 16 步

- 建立表格 temp_sixteen，讀取 temp_fourteen 中的所有記錄。
- 使用 UPDATE 將 temp_sixteen 中的 event_date（其中為 NULL）設為 last_year/12/31。

```
DROP TABLE IF EXISTS temp_sixteen;
CREATE TABLE temp_sixteen AS
SELECT * FROM temp_fourteen;
UPDATE temp_sixteen
SET event_date = (
SELECT date(temp_fifteen.admit_year || '-12-31')
FROM temp_fifteen
WHERE temp_fifteen.subject_id = temp_sixteen.subject_id)
WHERE event_date IS NULL;
SELECT * FROM temp_sixteen;
```

🔍 第 17 步

1. 建立表格temp_seventeen，讀取temp_sixteen中的所有記錄。
2. 使用子查詢透過匹配subject_id來計算性別（男性=1，女性=0）。
3. 使用子查詢透過匹配subject_id來計算年齡（基於index_date）。

```
DROP TABLE IF EXISTS temp_seventeen;
CREATE TABLE temp_seventeen AS
SELECT temp_sixteen.*,(SELECT CASE WHEN patients.gender = 'M' THEN 1 ELSE 0 END
FROM mimiciv_hosp.patients AS patients
WHERE patients.subject_id = temp_sixteen.subject_id) AS gender,
(SELECT (CAST(strftime('%Y',temp_sixteen.index_date) AS INTEGER) - (patients.anchor_year -
patients.anchor_age))
FROM mimiciv_hosp.patients AS patients
WHERE patients.subject_id = temp_sixteen.subject_id) AS age
FROM temp_sixteen;
SELECT subject_id,gender,event_date,index_date,with_psychosis,"E",age
FROM temp_seventeen;
```

🔍 第 18 步

1. 建立表temp_eighteen，讀取temp_seventeen中的所有記錄。
2. 從對照組（with_psychosis = FALSE）中刪除與病例組（with_psychosis = TRUE）中性別和年齡不匹配的整行。

```
DROP TABLE IF EXISTS temp_eighteen;
CREATE TABLE temp_eighteen AS
SELECT * FROM temp_seventeen;
DELETE FROM temp_eighteen
WHERE with_psychosis = FALSE
AND NOT EXISTS (
SELECT 1
FROM temp_eighteen temp_eighteen_case
WHERE with_psychosis = TRUE
AND temp_eighteen.gender = temp_eighteen_case.gender
AND temp_eighteen.age = temp_eighteen_case.age);
SELECT subject_id,gender,event_date,index_date,with_psychosis,"E",age
FROM temp_eighteen;
```

🔍 第 19 步

1. 建立表 temp_nineteen，讀取 temp_eighteen 中的所有記錄。
2. 使用 ALTER TABLE 修改現有的 temp_nineteen 表的結構（新增列 T）。
3. 使用 UPDATE 更新 temp_nineteen 中的 T 欄位。

```
DROP TABLE IF EXISTS temp_nineteen;
CREATE TABLE temp_nineteen AS
SELECT * FROM temp_eighteen;
ALTER TABLE temp_nineteen
ADD COLUMN "T" INTEGER;
UPDATE temp_nineteen
SET "T" = (event_date - index_date);
SELECT subject_id, gender, event_date, index_date, with_psychosis, "E", age, "T"
FROM temp_nineteen;
```

🔍 第 20 步

1. 建立表格 temp_twenty 來讀取 temp_nineteen 中的所有記錄。
2. 使用 DELETE 從 temp_twenty 刪除 T 列小於或等於 0 的記錄。

```
DROP TABLE IF EXISTS temp_twenty;
CREATE TABLE temp_twenty AS
SELECT subject_id, gender, event_date, index_date, with_psychosis, "E", age, "T"
FROM temp_nineteen;
DELETE FROM temp_twenty
WHERE T <= 0;
SELECT * FROM temp_twenty;
```

🔍 第 21 步

1. 刪除現有的 temp_twenty_one 表（如果有）並建立新的臨時表 temp_twenty_one 來儲存來自醫院和 ED 來源的 subject_id、admit_date（作為 DATE）、icd_code 和 icd_version。
2. 使用 UNION ALL 垂直合併兩個結果集：一個來自 mimiciv_hosp.diagnoses_icd 與 mimiciv_hosp.admissions 的連接，另一個來自 mimic_ed.diagnosis 與 mimic_ed.edstays 的連接。
3. 最後，從新建立的 temp_twenty_one 中選擇所有行來驗證其內容。

```
DROP TABLE IF EXISTS temp_twenty_one;
CREATE TEMP TABLE temp_twenty_one AS
SELECT subject_id, DATE(admittime) AS admit_date, icd_code, icd_version
FROM mimiciv_hosp.diagnoses_icd
NATURAL JOIN mimiciv_hosp.admissions
UNION ALL
SELECT subject_id, DATE(intime) AS admit_date, icd_code, icd_version
FROM mimic_ed.diagnosis
NATURAL JOIN mimic_ed.edstays;
SELECT * FROM temp_twenty_one;
```

⌚ 第 22 步

- 1.透過讀取 temp_twenty_one 並執行新的 SELECT 查詢來建立表 temp_twenty_two。
- 2.對 subject_id 使用 LEFT JOIN，以便保留 temp_twenty 中的每個患者。
- 3.對於每種疾病類別，首先應用一個內部 CASE，當診斷的 admit_date 介於患者的 index_date 和 event_date 之間並且 icd_code 屬於該類別時，該 CASE 返回 1，否則返回 0。
- 4.將每個內部案例包裹在 SUM(...) 中，以計算每個患者符合該病情的次數，並將 SUM 包裹在 COALESCE(..., 0) 中，以將任何 NULL（即沒有匹配的行）變為 0。
- 5.使用 (CASE WHEN 匹配診斷的數量 > 0 THEN 'TRUE' ELSE 'FALSE' END) 對每個患者的疾病存在進行分類，其中 "TRUE" 明確表示在患者的 index_date 和 event_date 之間至少發生了一次診斷。
- 6.對高血壓、心臟病、神經系統疾病、糖尿病和高血脂 ICD 代碼集重複步驟 3-5。
- 7.按 t.subject_id 將所有聚合結果分組，以便每行代表一名患者。

```
DROP TABLE IF EXISTS temp_twenty_two;
CREATE TABLE temp_twenty_two AS SELECT t.subject_id,
CASE WHEN SUM(CASE WHEN d.admit_date BETWEEN t.index_date AND t.event_date
AND d.icd_code IN (SELECT icd_code FROM hypertension_icd_codes
WHERE icd_version = d.icd_version) THEN 1 ELSE 0 END) > 0
THEN 'TRUE' ELSE 'FALSE' END AS with_hypertension,
SUM(CASE WHEN d.admit_date BETWEEN t.index_date AND t.event_date
AND d.icd_code IN (SELECT icd_code FROM hypertension_icd_codes
WHERE icd_version = d.icd_version) THEN 1 ELSE 0 END) AS hypertension_times,
CASE WHEN SUM(CASE WHEN d.admit_date BETWEEN t.index_date AND t.event_date
AND d.icd_code IN (SELECT icd_code FROM heart_type_disease_icd_codes
WHERE icd_version = d.icd_version) THEN 1 ELSE 0 END) > 0
THEN 'TRUE' ELSE 'FALSE' END AS with_heart_type_disease,
SUM(CASE WHEN d.admit_date BETWEEN t.index_date AND t.event_date
AND d.icd_code IN (SELECT icd_code FROM heart_type_disease_icd_codes
WHERE icd_version = d.icd_version) THEN 1 ELSE 0 END) AS heart_type_disease_times,
CASE WHEN SUM(CASE WHEN d.admit_date BETWEEN t.index_date AND t.event_date
AND d.icd_code IN (SELECT icd_code FROM neurological_type_disease_icd_codes
WHERE icd_version = d.icd_version) THEN 1 ELSE 0 END) > 0
THEN 'TRUE' ELSE 'FALSE' END AS with_neurological_type_disease,
SUM(CASE WHEN d.admit_date BETWEEN t.index_date AND t.event_date
AND d.icd_code IN (SELECT icd_code FROM neurological_type_disease_icd_codes
WHERE icd_version = d.icd_version) THEN 1 ELSE 0 END) AS neurological_type_disease_times,
CASE WHEN SUM(CASE WHEN d.admit_date BETWEEN t.index_date AND t.event_date
AND d.icd_code IN (SELECT icd_code FROM diabetes_icd_codes
WHERE icd_version = d.icd_version) THEN 1 ELSE 0 END) > 0
THEN 'TRUE' ELSE 'FALSE' END AS with_diabetes,
SUM(CASE WHEN d.admit_date BETWEEN t.index_date AND t.event_date
AND d.icd_code IN (SELECT icd_code FROM diabetes_icd_codes
WHERE icd_version = d.icd_version) THEN 1 ELSE 0 END) AS diabetes_times,
CASE WHEN SUM(CASE WHEN d.admit_date BETWEEN t.index_date AND t.event_date
AND d.icd_code IN (SELECT icd_code FROM hyperlipidemia_icd_codes
WHERE icd_version = d.icd_version) THEN 1 ELSE 0 END) > 0
THEN 'TRUE' ELSE 'FALSE' END AS with_hyperlipidemia,
SUM(CASE WHEN d.admit_date BETWEEN t.index_date AND t.event_date
AND d.icd_code IN (SELECT icd_code FROM hyperlipidemia_icd_codes
WHERE icd_version = d.icd_version) THEN 1 ELSE 0 END) AS hyperlipidemia_times
FROM temp_twenty AS t LEFT JOIN temp_twenty_one AS d ON t.subject_id = d.subject_id
GROUP BY t.subject_id;
SELECT * FROM temp_twenty_two;
```

第 23 步

1. 建立表格temp_twenty_three來儲存temp_twenty和temp_twenty_two合併的資料。
2. 使用 LEFT JOIN 根據 subject_id 合併 temp_twenty 和 temp_twenty_two。

```
DROP TABLE IF EXISTS temp_twenty_three;
CREATE TABLE temp_twenty_three AS
SELECT
    temp_twenty.subject_id,
    temp_twenty.gender,
    temp_twenty.age,
    temp_twenty.with_psychosis,
    temp_twenty.index_date,
    temp_twenty.event_date,
    temp_twenty."T",
    temp_twenty."E",
    temp_twenty_two.with_hypertension,
    temp_twenty_two.with_heart_type_disease,
    temp_twenty_two.with_neurological_type_disease,
    temp_twenty_two.with_diabetes,
    temp_twenty_two.with_hyperlipidemia,
    temp_twenty_two.hypertension_times,
    temp_twenty_two.heart_type_disease_times,
    temp_twenty_two.neurological_type_disease_times,
    temp_twenty_two.diabetes_times,
    temp_twenty_two.hyperlipidemia_times
FROM temp_twenty
LEFT JOIN temp_twenty_two
ON temp_twenty.subject_id = temp_twenty_two.subject_id;
SELECT * FROM temp_twenty_three;
```

(資料來源：https://mimic-iv-disease-medication-sql-ting-uwu.streamlit.app/Disease_SQL_Examples)

二、特定藥物查詢

🔍 步驟 1

藥品名稱統一大小寫並對相同名稱進行擴展搜尋（使用 mimic_hosp.prescriptions 表進行查詢）。

```
DROP TABLE IF EXISTS temp_one;
CREATE TEMP TABLE temp_one AS
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime
FROM mimiciv_hosp.prescriptions
WHERE LOWER(drug) LIKE LOWER('aspirin%')
OR LOWER(drug) LIKE LOWER('warfarin%')
OR LOWER(drug) LIKE LOWER('clopidogrel%')
OR LOWER(drug) LIKE LOWER('apixaban%')
OR LOWER(drug) LIKE LOWER('rivaroxaban%')
OR LOWER(drug) LIKE LOWER('dabigatran etexilate%')
OR LOWER(drug) LIKE LOWER('cilostazol%')
OR LOWER(drug) LIKE LOWER('enoxaparin%');
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime
FROM temp_one;
```

🔍 第 2 步

藥物單位為 MG（使用步驟 1 中的表格進行查詢）。

```
DROP TABLE IF EXISTS temp_two;
CREATE TEMP TABLE temp_two AS
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime
FROM temp_one
WHERE dose_unit_rx = 'mg';
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime
FROM temp_one
WHERE dose_unit_rx = 'mg';
```

第3步

藥物劑量不為 NULL (使用步驟 2 中的表格進行查詢)。

```
DROP TABLE IF EXISTS temp_three;
CREATE TEMP TABLE temp_three AS
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime
FROM temp_two
WHERE dose_val_rx IS NOT NULL;
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime
FROM temp_two
WHERE dose_val_rx IS NOT NULL;
```

第4步

藥物使用的開始和結束時間不為 NULL (使用步驟 3 中的表格進行查詢)。

```
DROP TABLE IF EXISTS temp_four;
CREATE TEMP TABLE temp_four AS
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime
FROM temp_three
WHERE (starttime IS NOT NULL AND stoptime IS NOT NULL);
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime
FROM temp_three
WHERE (starttime IS NOT NULL AND stoptime IS NOT NULL);
```

第5步

- 新增hours_diff列，儲存從開始使用藥物到結束使用藥物的時長（以小時為單位）。
- 使用ABS確保hours_diff列中的值轉換為絕對值，防止負值出現（使用步驟4中的表進行查詢）。

```
DROP TABLE IF EXISTS temp_five;
CREATE TEMP TABLE temp_five AS
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime,
ABS((julianday(stoptime) - julianday(starttime)) * 24) AS hours_diff
FROM temp_four;
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime,
ABS((julianday(stoptime) - julianday(starttime)) * 24) AS hours_diff
FROM temp_four;
```

第 6 步

將 hours_diff 列中的所有 0 值變更為 1 (使用步驟 5 中的表格進行查詢)。

```
DROP TABLE IF EXISTS temp_six;
CREATE TEMP TABLE temp_six AS
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime,
CASE
WHEN ABS((julianday(stoptime) - julianday(starttime)) * 24) = 0
THEN 1
ELSE ABS((julianday(stoptime) - julianday(starttime)) * 24)
END AS hours_diff
FROM temp_five;
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime,
CASE
WHEN ABS((julianday(stoptime) - julianday(starttime)) * 24) = 0
THEN 1
ELSE ABS((julianday(stoptime) - julianday(starttime)) * 24)
END AS hours_diff
FROM temp_five;
```

第 7 步

刪除 dose_val_rx 欄位包含值 0 的整行 (使用步驟 6 中的表格進行查詢)。

```
DROP TABLE IF EXISTS temp_seven;
CREATE TEMP TABLE temp_seven AS
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime, hours_diff
FROM temp_six;
DELETE FROM temp_seven
WHERE dose_val_rx = '0';
SELECT subject_id, drug, dose_val_rx, dose_unit_rx, starttime, stoptime, hours_diff
FROM temp_seven;
```

(資料來源：https://mimic-iv-disease-medication-sql-ting-uwu.streamlit.app/Drug_SQL_Examples)

附錄二

Cox 模型結果，全面呈現八種藥物(Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin)對缺血性中風患者的風險影響，關於各項藥物預測缺血性中風的風險比詳細結果。

以 Aspirin 藥物 Cox 模型結果舉例，將變數依以下命名規則加以定義並置入模型：變數 gender 代表病患性別，age 為入組時年齡（單位：歲），而變數名中有 with 為二元型，例如 with_psychosis 為嚴重型精神病共病指標，其他二元型則以此類推，接著是變數名中有 times 為數值型，例如 hypertension_times 為高血壓診斷累計次數，其他數值型則以此類推。針對 Aspirin 納入二元型 aspirin 使用率及數值型 aspirin_count (用藥次數)、aspirin_mean (平均每次劑量，mg)、aspirin_max (最大單次劑量，mg)、aspirin_min (最小單次劑量，mg)、aspirin_median (劑量中位數，mg)、aspirin_hours_diff_mean (用藥起訖時間平均時數)、aspirin_hours_diff_max (最大用藥起訖時間時數)、aspirin_hours_diff_min (最小用藥起訖時間時數) 以及 aspirin_hours_diff_median (用藥起訖時間中位數時數)。所有變數視需要已進行標準化及中心化處理，並納入 Cox 比例風險模型，以估計 Aspirin 對缺血性中風的風險影響，而其他八種藥物的命名規則也是以此類推，最終報告各項風險比 (HR)、95% 信賴區間與 p 值。

Aspirin

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR{>F} |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.075422 | 0.986832 | 1.171966 | 0.097367 | 0.281701 | 14.561463 | 0.000136 |
| age | 1.040957 | 1.037527 | 1.044400 | < 0.0001 | 1.448839 | 74.892252 | < 0.0001 |
| with_psychosis | 0.949464 | 0.852550 | 1.057394 | 0.345153 | 0.033980 | 1.756468 | 0.185068 |
| with_hypertension | 1.340334 | 1.174158 | 1.530029 | < 0.0001 | 0.619480 | 32.021688 | < 0.0001 |
| with_heart_type_disease | 1.748954 | 1.570014 | 1.948288 | < 0.0001 | 4.209913 | 217.615510 | < 0.0001 |
| with_neurological_type_disease | 3.039832 | 2.779998 | 3.323951 | < 0.0001 | 17.690994 | 914.469021 | < 0.0001 |
| with_diabetes | 1.204066 | 1.099387 | 1.318712 | < 0.0001 | 0.703119 | 36.345072 | < 0.0001 |
| with_hyperlipidemia | 1.577367 | 1.419190 | 1.753174 | < 0.0001 | 4.888510 | 252.693031 | < 0.0001 |
| aspirin | 0.689131 | 0.627211 | 0.757164 | < 0.0001 | 0.230220 | 11.900346 | 0.000561 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.171551 | 1.075752 | 1.275880 | 0.000275 | 0.028366 | 1.451377 | 0.228310 |
| age | 1.055587 | 1.052547 | 1.058635 | < 0.0001 | 12.558560 | 642.572477 | < 0.0001 |
| with_psychosis | 1.411042 | 1.268700 | 1.569353 | < 0.0001 | 0.095775 | 4.900435 | 0.026852 |
| hypertension_times | 0.956387 | 0.939171 | 0.973919 | < 0.0001 | 0.470708 | 24.084309 | < 0.0001 |
| heart_type_disease_times | 1.015708 | 1.009248 | 1.022208 | < 0.0001 | 3.401949 | 174.064442 | < 0.0001 |
| neurological_type_disease_times | 1.032933 | 1.022272 | 1.043706 | < 0.0001 | 1.295750 | 66.298485 | < 0.0001 |
| diabetes_times | 1.012999 | 1.003675 | 1.022411 | 0.006194 | 0.109769 | 5.616468 | 0.017794 |
| hyperlipidemia_times | 1.016729 | 0.994812 | 1.039130 | 0.135666 | 1.797799 | 91.986357 | < 0.0001 |
| aspirin_count | 0.950832 | 0.930414 | 0.971697 | < 0.0001 | 1.393879 | 71.319337 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.135563 | 1.042520 | 1.236910 | 0.003561 | 0.108243 | 5.537207 | 0.018618 |
| age | 1.054776 | 1.051695 | 1.057867 | < 0.0001 | 10.400032 | 532.017194 | < 0.0001 |
| with_psychosis | 1.413246 | 1.270405 | 1.572147 | < 0.0001 | 0.113395 | 5.800762 | 0.016021 |
| hypertension_times | 0.950193 | 0.933190 | 0.967506 | < 0.0001 | 0.344041 | 17.599510 | < 0.0001 |
| heart_type_disease_times | 1.007754 | 1.001880 | 1.013662 | 0.009602 | 1.675984 | 85.735514 | < 0.0001 |
| neurological_type_disease_times | 1.040503 | 1.029320 | 1.051808 | < 0.0001 | 1.344907 | 68.799154 | < 0.0001 |
| diabetes_times | 1.009967 | 1.000826 | 1.019191 | 0.032519 | 0.250940 | 12.836899 | 0.000340 |
| hyperlipidemia_times | 1.007564 | 0.985999 | 1.029601 | 0.494851 | 1.257814 | 64.343884 | < 0.0001 |
| aspirin_mean | 1.000860 | 1.000429 | 1.001290 | < 0.0001 | 0.951539 | 48.676298 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.147013 | 1.053013 | 1.249404 | 0.001666 | 0.093659 | 4.790200 | 0.028624 |
| age | 1.055300 | 1.052229 | 1.058380 | < 0.0001 | 10.841655 | 554.496022 | < 0.0001 |
| with_psychosis | 1.409209 | 1.266817 | 1.567606 | < 0.0001 | 0.112921 | 5.775323 | 0.016254 |
| hypertension_times | 0.950568 | 0.933563 | 0.967882 | < 0.0001 | 0.343097 | 17.547674 | < 0.0001 |
| heart_type_disease_times | 1.008231 | 1.002320 | 1.014177 | 0.006289 | 1.607097 | 82.194904 | < 0.0001 |
| neurological_type_disease_times | 1.039724 | 1.028577 | 1.050992 | < 0.0001 | 1.340140 | 68.541423 | < 0.0001 |
| diabetes_times | 1.009782 | 1.000648 | 1.018999 | 0.035749 | 0.255076 | 13.045872 | 0.000304 |
| hyperlipidemia_times | 1.008598 | 0.987058 | 1.030608 | 0.437010 | 1.265717 | 64.735031 | < 0.0001 |
| aspirin_max | 1.000245 | 0.999893 | 1.000597 | 0.173013 | 0.524469 | 26.823960 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.132438 | 1.039768 | 1.233366 | 0.004300 | 0.107933 | 5.521557 | 0.018785 |
| age | 1.054578 | 1.051499 | 1.057665 | <0.0001 | 10.418164 | 532.965839 | <0.0001 |
| with_psychosis | 1.412761 | 1.269956 | 1.571624 | <0.0001 | 0.111081 | 5.682593 | 0.017136 |
| hypertension_times | 0.950159 | 0.933184 | 0.967442 | <0.0001 | 0.348553 | 17.831028 | <0.0001 |
| heart_type_disease_times | 1.008295 | 1.002470 | 1.014154 | 0.005201 | 1.834955 | 93.871485 | <0.0001 |
| neurological_type_disease_times | 1.040315 | 1.029157 | 1.051593 | <0.0001 | 1.336401 | 68.366750 | <0.0001 |
| diabetes_times | 1.009690 | 1.000562 | 1.018901 | 0.037416 | 0.259934 | 13.297543 | 0.000266 |
| hyperlipidemia_times | 1.008055 | 0.986532 | 1.030047 | 0.466255 | 1.285276 | 65.751349 | <0.0001 |
| aspirin_min | 1.001289 | 1.000837 | 1.001742 | <0.0001 | 1.034860 | 52.940730 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.135109 | 1.042169 | 1.236337 | 0.003642 | 0.108948 | 5.573557 | 0.018235 |
| age | 1.054735 | 1.051657 | 1.057822 | <0.0001 | 10.389542 | 531.507925 | <0.0001 |
| with_psychosis | 1.414280 | 1.271332 | 1.573301 | <0.0001 | 0.113269 | 5.794631 | 0.016077 |
| hypertension_times | 0.950208 | 0.933208 | 0.967517 | <0.0001 | 0.344826 | 17.640601 | <0.0001 |
| heart_type_disease_times | 1.007876 | 1.002020 | 1.013766 | 0.008327 | 1.713867 | 87.677936 | <0.0001 |
| neurological_type_disease_times | 1.040530 | 1.029371 | 1.051809 | <0.0001 | 1.342569 | 68.683127 | <0.0001 |
| diabetes_times | 1.009970 | 1.000830 | 1.019193 | 0.032453 | 0.249484 | 12.763087 | 0.000354 |
| hyperlipidemia_times | 1.007661 | 0.986122 | 1.029672 | 0.488756 | 1.260772 | 64.498562 | <0.0001 |
| aspirin_median | 1.000933 | 1.000521 | 1.001347 | <0.0001 | 1.059833 | 54.218893 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.152626 | 1.058402 | 1.255239 | 0.001097 | 0.056015 | 2.864189 | 0.090574 |
| age | 1.055484 | 1.052411 | 1.058565 | <0.0001 | 11.898873 | 608.422669 | <0.0001 |
| with_psychosis | 1.404432 | 1.261996 | 1.562944 | <0.0001 | 0.112001 | 5.726945 | 0.016708 |
| hypertension_times | 0.950876 | 0.933876 | 0.968186 | <0.0001 | 0.357759 | 18.293216 | <0.0001 |
| heart_type_disease_times | 1.008921 | 1.003119 | 1.014757 | 0.002544 | 2.156892 | 110.287936 | <0.0001 |
| neurological_type_disease_times | 1.039162 | 1.028098 | 1.050346 | <0.0001 | 1.308729 | 66.918970 | <0.0001 |
| diabetes_times | 1.009439 | 1.000301 | 1.018661 | 0.042887 | 0.258326 | 13.208939 | 0.000279 |
| hyperlipidemia_times | 1.009709 | 0.988269 | 1.031615 | 0.377569 | 1.391967 | 71.175186 | <0.0001 |
| aspirin_hours_diff_mean | 1.000126 | 0.999399 | 1.000853 | 0.733822 | 0.023780 | 1.215926 | 0.270164 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.160106 | 1.065231 | 1.263430 | 0.000646 | 0.046436 | 2.374745 | 0.123315 |
| age | 1.055755 | 1.052702 | 1.058817 | <0.0001 | 12.435587 | 635.954922 | <0.0001 |
| with_psychosis | 1.418793 | 1.274904 | 1.578923 | <0.0001 | 0.134257 | 6.865884 | 0.008787 |
| hypertension_times | 0.951305 | 0.934281 | 0.968640 | <0.0001 | 0.362002 | 18.512761 | <0.0001 |
| heart_type_disease_times | 1.009994 | 1.004142 | 1.015881 | 0.000797 | 2.417361 | 123.623635 | <0.0001 |
| neurological_type_disease_times | 1.038175 | 1.027211 | 1.049256 | <0.0001 | 1.314404 | 67.218510 | <0.0001 |
| diabetes_times | 1.010123 | 1.001000 | 1.019330 | 0.029572 | 0.222403 | 11.373670 | 0.000745 |
| hyperlipidemia_times | 1.010322 | 0.988901 | 1.032208 | 0.347632 | 1.430778 | 73.169850 | <0.0001 |
| aspirin_hours_diff_max | 0.999660 | 0.999207 | 1.000113 | 0.141301 | 0.317086 | 16.215732 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.149704 | 1.055919 | 1.251818 | 0.001312 | 0.065443 | 3.346332 | 0.067358 |
| age | 1.055143 | 1.052082 | 1.058214 | <0.0001 | 11.436277 | 584.781809 | <0.0001 |
| with_psychosis | 1.399893 | 1.258395 | 1.557301 | <0.0001 | 0.097865 | 5.004203 | 0.025288 |
| hypertension_times | 0.951070 | 0.934056 | 0.968395 | <0.0001 | 0.364424 | 18.634432 | <0.0001 |
| heart_type_disease_times | 1.009093 | 1.003321 | 1.014898 | 0.001982 | 2.106733 | 107.725539 | <0.0001 |
| neurological_type_disease_times | 1.039177 | 1.028136 | 1.050336 | <0.0001 | 1.306590 | 66.811094 | <0.0001 |
| diabetes_times | 1.009261 | 1.000111 | 1.018494 | 0.047267 | 0.272809 | 13.949821 | 0.000188 |
| hyperlipidemia_times | 1.009956 | 0.988489 | 1.031888 | 0.366124 | 1.381532 | 70.643170 | <0.0001 |
| aspirin_hours_diff_min | 1.000941 | 1.000244 | 1.001640 | 0.008185 | 0.070615 | 3.610810 | 0.057408 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.151807 | 1.057712 | 1.254273 | 0.001153 | 0.058138 | 2.972754 | 0.084680 |
| age | 1.055417 | 1.052343 | 1.058500 | <0.0001 | 11.791473 | 602.926101 | <0.0001 |
| with_psychosis | 1.402779 | 1.260615 | 1.560975 | <0.0001 | 0.108257 | 5.535414 | 0.018637 |
| hypertension_times | 0.950865 | 0.933862 | 0.968177 | <0.0001 | 0.358553 | 18.333667 | <0.0001 |
| heart_type_disease_times | 1.008877 | 1.003086 | 1.014701 | 0.002620 | 2.134154 | 109.124402 | <0.0001 |
| neurological_type_disease_times | 1.039235 | 1.028170 | 1.050419 | <0.0001 | 1.308047 | 66.883540 | <0.0001 |
| diabetes_times | 1.009382 | 1.000240 | 1.018608 | 0.044249 | 0.262471 | 13.420751 | 0.000249 |
| hyperlipidemia_times | 1.009703 | 0.988257 | 1.031615 | 0.378015 | 1.387073 | 70.924327 | <0.0001 |
| aspirin_hours_diff_median | 1.000248 | 0.999498 | 1.000999 | 0.517519 | 0.006793 | 0.347344 | 0.555622 |

Warfarin

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.053600 | 0.966988 | 1.147970 | 0.232880 | 0.313252 | 16.191053 | <0.0001 |
| age | 1.040783 | 1.037354 | 1.044224 | <0.0001 | 1.402669 | 72.499620 | <0.0001 |
| with_psychosis | 0.943279 | 0.847034 | 1.050461 | 0.287589 | 0.036587 | 1.891071 | 0.169084 |
| with_hypertension | 1.298763 | 1.137882 | 1.482391 | 0.000107 | 0.574828 | 29.711111 | <0.0001 |
| with_heart_type_disease | 1.648585 | 1.483588 | 1.831932 | <0.0001 | 4.042351 | 208.936646 | <0.0001 |
| with_neurological_type_disease | 3.081991 | 2.818529 | 3.370080 | <0.0001 | 17.762637 | 918.095916 | <0.0001 |
| with_diabetes | 1.170044 | 1.068697 | 1.281003 | 0.000681 | 0.651697 | 33.684212 | <0.0001 |
| with_hyperlipidemia | 1.491386 | 1.343120 | 1.656019 | <0.0001 | 4.684360 | 242.120143 | <0.0001 |
| warfarin | 0.716147 | 0.634932 | 0.807751 | <0.0001 | 0.056872 | 2.939537 | 0.086438 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.152658 | 1.058665 | 1.254995 | 0.001062 | 0.060840 | 3.111647 | 0.077737 |
| age | 1.055545 | 1.052507 | 1.058592 | <0.0001 | 12.021139 | 614.821684 | <0.0001 |
| with_psychosis | 1.406650 | 1.264552 | 1.564716 | <0.0001 | 0.110526 | 5.652837 | 0.017429 |
| hypertension_times | 0.950006 | 0.933079 | 0.967240 | <0.0001 | 0.375932 | 19.227072 | <0.0001 |
| heart_type_disease_times | 1.011987 | 1.005931 | 1.018080 | <0.0001 | 2.617498 | 133.872045 | <0.0001 |
| neurological_type_disease_times | 1.043494 | 1.031651 | 1.055473 | <0.0001 | 1.443133 | 73.809093 | <0.0001 |
| diabetes_times | 1.009143 | 0.999947 | 1.018425 | 0.051342 | 0.295052 | 15.090446 | 0.000103 |
| hyperlipidemia_times | 1.009613 | 0.988387 | 1.031294 | 0.377510 | 1.397577 | 71.479110 | <0.0001 |
| warfarin_count | 0.987784 | 0.978250 | 0.997411 | 0.012999 | 0.527869 | 26.997895 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.157927 | 1.063378 | 1.260883 | 0.000741 | 0.059557 | 3.045268 | 0.080976 |
| age | 1.055655 | 1.052610 | 1.058709 | <0.0001 | 12.056342 | 616.467831 | <0.0001 |
| with_psychosis | 1.404133 | 1.262252 | 1.561961 | <0.0001 | 0.104733 | 5.355227 | 0.020662 |
| hypertension_times | 0.950806 | 0.933825 | 0.968096 | <0.0001 | 0.359766 | 18.395649 | <0.0001 |
| heart_type_disease_times | 1.009931 | 1.004047 | 1.015850 | 0.000918 | 2.075231 | 106.111212 | <0.0001 |
| neurological_type_disease_times | 1.039693 | 1.028572 | 1.050934 | <0.0001 | 1.308851 | 66.924472 | <0.0001 |
| diabetes_times | 1.009295 | 1.000182 | 1.018492 | 0.045576 | 0.267448 | 13.675231 | 0.000217 |
| hyperlipidemia_times | 1.009551 | 0.988177 | 1.031386 | 0.383948 | 1.383144 | 70.723237 | <0.0001 |
| warfarin_mean | 0.981007 | 0.952634 | 1.010226 | 0.200356 | 0.001107 | 0.056617 | 0.811925 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.158752 | 1.064182 | 1.261725 | 0.000694 | 0.057169 | 2.923223 | 0.087316 |
| age | 1.055665 | 1.052623 | 1.058715 | < 0.0001 | 12.141687 | 620.838476 | < 0.0001 |
| with_psychosis | 1.404232 | 1.262362 | 1.562047 | < 0.0001 | 0.104382 | 5.337325 | 0.020875 |
| hypertension_times | 0.950676 | 0.933684 | 0.967977 | < 0.0001 | 0.361467 | 18.482838 | < 0.0001 |
| heart_type_disease_times | 1.010579 | 1.004633 | 1.016560 | 0.000473 | 2.128596 | 108.841088 | < 0.0001 |
| neurological_type_disease_times | 1.040403 | 1.029167 | 1.051762 | < 0.0001 | 1.316085 | 67.295121 | < 0.0001 |
| diabetes_times | 1.009199 | 1.000074 | 1.018407 | 0.048164 | 0.270895 | 13.851632 | 0.000198 |
| hyperlipidemia_times | 1.009303 | 0.987938 | 1.031129 | 0.396293 | 1.380056 | 70.566144 | < 0.0001 |
| warfarin_max | 0.980225 | 0.959136 | 1.001779 | 0.071890 | 0.023953 | 1.224798 | 0.268423 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.153962 | 1.059706 | 1.256601 | 0.000988 | 0.063896 | 3.267202 | 0.070681 |
| age | 1.055555 | 1.052505 | 1.058615 | < 0.0001 | 11.912732 | 609.132034 | < 0.0001 |
| with_psychosis | 1.406756 | 1.264592 | 1.564903 | < 0.0001 | 0.107481 | 5.495826 | 0.019064 |
| hypertension_times | 0.950903 | 0.933904 | 0.968212 | < 0.0001 | 0.359914 | 18.403426 | < 0.0001 |
| heart_type_disease_times | 1.009041 | 1.003222 | 1.014894 | 0.002288 | 2.036898 | 104.152414 | < 0.0001 |
| neurological_type_disease_times | 1.039044 | 1.028017 | 1.050189 | < 0.0001 | 1.307148 | 66.838193 | < 0.0001 |
| diabetes_times | 1.009519 | 1.000397 | 1.018724 | 0.040799 | 0.263934 | 13.495693 | 0.000239 |
| hyperlipidemia_times | 1.009767 | 0.988335 | 1.031663 | 0.374547 | 1.386114 | 70.875979 | < 0.0001 |
| warfarin_min | 0.999630 | 0.962902 | 1.037759 | 0.984548 | 0.026304 | 1.344979 | 0.246160 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.158192 | 1.063631 | 1.261161 | 0.000726 | 0.059444 | 3.039510 | 0.081263 |
| age | 1.055665 | 1.052620 | 1.058719 | < 0.0001 | 12.061369 | 616.724980 | < 0.0001 |
| with_psychosis | 1.403600 | 1.261755 | 1.561391 | < 0.0001 | 0.104687 | 5.352878 | 0.020690 |
| hypertension_times | 0.950729 | 0.933761 | 0.968004 | < 0.0001 | 0.359777 | 18.396190 | < 0.0001 |
| heart_type_disease_times | 1.009997 | 1.004121 | 1.015907 | 0.000833 | 2.081076 | 106.410115 | < 0.0001 |
| neurological_type_disease_times | 1.039954 | 1.028772 | 1.051258 | < 0.0001 | 1.309006 | 66.932425 | < 0.0001 |
| diabetes_times | 1.009287 | 1.000182 | 1.018475 | 0.045564 | 0.267562 | 13.681063 | 0.000217 |
| hyperlipidemia_times | 1.009574 | 0.988223 | 1.031386 | 0.382280 | 1.383201 | 70.726208 | < 0.0001 |
| warfarin_median | 0.979700 | 0.951748 | 1.008473 | 0.164926 | 0.001464 | 0.074879 | 0.784362 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.155302 | 1.061086 | 1.257884 | 0.000881 | 0.060009 | 3.068406 | 0.079831 |
| age | 1.055690 | 1.052637 | 1.058752 | < 0.0001 | 12.026508 | 614.942545 | < 0.0001 |
| with_psychosis | 1.406160 | 1.264126 | 1.564153 | < 0.0001 | 0.104879 | 5.362690 | 0.020574 |
| hypertension_times | 0.950865 | 0.933855 | 0.968184 | < 0.0001 | 0.359707 | 18.392650 | < 0.0001 |
| heart_type_disease_times | 1.009827 | 1.003906 | 1.015783 | 0.001116 | 2.070886 | 105.889079 | < 0.0001 |
| neurological_type_disease_times | 1.039235 | 1.028209 | 1.050379 | < 0.0001 | 1.309301 | 66.947521 | < 0.0001 |
| diabetes_times | 1.009275 | 1.000145 | 1.018489 | 0.046466 | 0.267715 | 13.688870 | 0.000216 |
| hyperlipidemia_times | 1.009326 | 0.987890 | 1.031227 | 0.396688 | 1.380577 | 70.592026 | < 0.0001 |
| warfarin_hours_diff_mean | 0.998021 | 0.994339 | 1.001717 | 0.293638 | 0.001835 | 0.093814 | 0.759384 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154585 | 1.060443 | 1.257085 | 0.000925 | 0.058585 | 2.995799 | 0.083484 |
| age | 1.055772 | 1.052729 | 1.058823 | < 0.0001 | 12.262741 | 627.071018 | < 0.0001 |
| with_psychosis | 1.407086 | 1.264945 | 1.565198 | < 0.0001 | 0.106643 | 5.453302 | 0.019533 |
| hypertension_times | 0.950791 | 0.933769 | 0.968123 | < 0.0001 | 0.369015 | 18.870074 | < 0.0001 |
| heart_type_disease_times | 1.011687 | 1.005685 | 1.017726 | 0.000130 | 2.306443 | 117.942926 | < 0.0001 |
| neurological_type_disease_times | 1.040658 | 1.029469 | 1.051969 | < 0.0001 | 1.341687 | 68.608871 | < 0.0001 |
| diabetes_times | 1.009006 | 0.999852 | 1.018244 | 0.053835 | 0.278182 | 14.225184 | 0.000162 |
| hyperlipidemia_times | 1.008546 | 0.987143 | 1.030413 | 0.436810 | 1.354830 | 69.281000 | < 0.0001 |
| warfarin_hours_diff_max | 0.997596 | 0.995771 | 0.999425 | 0.010002 | 0.167472 | 8.563882 | 0.003430 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.152433 | 1.058452 | 1.254759 | 0.001080 | 0.063233 | 3.233407 | 0.072153 |
| age | 1.055418 | 1.052365 | 1.058479 | < 0.0001 | 11.826690 | 604.756686 | < 0.0001 |
| with_psychosis | 1.409290 | 1.266913 | 1.567667 | < 0.0001 | 0.108652 | 5.555924 | 0.018420 |
| hypertension_times | 0.950906 | 0.933908 | 0.968213 | < 0.0001 | 0.361534 | 18.486989 | < 0.0001 |
| heart_type_disease_times | 1.008733 | 1.002943 | 1.014556 | 0.003068 | 2.047201 | 104.683423 | < 0.0001 |
| neurological_type_disease_times | 1.039013 | 1.027966 | 1.050178 | < 0.0001 | 1.304353 | 66.697990 | < 0.0001 |
| diabetes_times | 1.009619 | 1.000498 | 1.018823 | 0.038678 | 0.263300 | 13.463805 | 0.000243 |
| hyperlipidemia_times | 1.010184 | 0.988751 | 1.032081 | 0.354430 | 1.395366 | 71.351919 | < 0.0001 |
| warfarin_hours_diff_min | 1.003110 | 0.998592 | 1.007649 | 0.177541 | 0.110709 | 5.661095 | 0.017347 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154839 | 1.060651 | 1.257391 | 0.000912 | 0.060649 | 3.101100 | 0.078242 |
| age | 1.055636 | 1.052582 | 1.058700 | < 0.0001 | 11.971006 | 612.104262 | < 0.0001 |
| with_psychosis | 1.406221 | 1.264179 | 1.564222 | < 0.0001 | 0.105177 | 5.377922 | 0.020395 |
| hypertension_times | 0.950853 | 0.933850 | 0.968166 | < 0.0001 | 0.359638 | 18.389096 | < 0.0001 |
| heart_type_disease_times | 1.009462 | 1.003562 | 1.015396 | 0.001638 | 2.046749 | 104.654823 | < 0.0001 |
| neurological_type_disease_times | 1.039131 | 1.028105 | 1.050275 | < 0.0001 | 1.307183 | 66.839206 | < 0.0001 |
| diabetes_times | 1.009376 | 1.000247 | 1.018589 | 0.044084 | 0.266100 | 13.606281 | 0.000226 |
| hyperlipidemia_times | 1.009554 | 0.988122 | 1.031451 | 0.385113 | 1.384292 | 70.781937 | < 0.0001 |
| warfarin_hours_diff_median | 0.998769 | 0.994924 | 1.002628 | 0.531284 | 0.000521 | 0.026624 | 0.870387 |

Clopidogrel

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.041829 | 0.955897 | 1.135486 | 0.350822 | 0.360897 | 18.664411 | <0.0001 |
| age | 1.040411 | 1.036975 | 1.043858 | <0.0001 | 1.409943 | 72.917528 | <0.0001 |
| with_psychosis | 0.949195 | 0.852312 | 1.057090 | 0.342505 | 0.033142 | 1.713995 | 0.190471 |
| with_hypertension | 1.287316 | 1.127471 | 1.469822 | 0.000189 | 0.531820 | 27.503945 | <0.0001 |
| with_heart_type_disease | 1.543117 | 1.387571 | 1.716100 | <0.0001 | 2.963042 | 153.238617 | <0.0001 |
| with_neurological_type_disease | 3.050261 | 2.789472 | 3.335431 | <0.0001 | 17.975013 | 929.607636 | <0.0001 |
| with_diabetes | 1.162603 | 1.061676 | 1.273124 | 0.001147 | 0.557090 | 28.810816 | <0.0001 |
| with_hyperlipidemia | 1.477956 | 1.330099 | 1.642250 | <0.0001 | 4.159153 | 215.097491 | <0.0001 |
| clopidogrel | 1.065790 | 0.949186 | 1.196719 | 0.281121 | 1.254747 | 64.891303 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.155100 | 1.060902 | 1.257662 | 0.000893 | 0.060261 | 3.081265 | 0.079202 |
| age | 1.055564 | 1.052519 | 1.058618 | <0.0001 | 12.128164 | 620.139980 | <0.0001 |
| with_psychosis | 1.403105 | 1.261054 | 1.561158 | <0.0001 | 0.104848 | 5.361089 | 0.020593 |
| hypertension_times | 0.950523 | 0.933611 | 0.967740 | <0.0001 | 0.358869 | 18.349758 | <0.0001 |
| heart_type_disease_times | 1.009690 | 1.003733 | 1.015682 | 0.001402 | 1.930771 | 98.724617 | <0.0001 |
| neurological_type_disease_times | 1.040507 | 1.028703 | 1.052446 | <0.0001 | 1.308131 | 66.887658 | <0.0001 |
| diabetes_times | 1.009785 | 1.000682 | 1.018972 | 0.035082 | 0.264708 | 13.535127 | 0.000234 |
| hyperlipidemia_times | 1.010786 | 0.989346 | 1.032692 | 0.326711 | 1.374436 | 70.277991 | <0.0001 |
| clopidogrel_count | 0.988534 | 0.958887 | 1.019099 | 0.457929 | 0.000216 | 0.011049 | 0.916285 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.145192 | 1.051635 | 1.247072 | 0.001822 | 0.080138 | 4.099187 | 0.042906 |
| age | 1.055261 | 1.052206 | 1.058326 | <0.0001 | 11.530706 | 589.814307 | <0.0001 |
| with_psychosis | 1.413470 | 1.270654 | 1.572338 | <0.0001 | 0.113157 | 5.788178 | 0.016136 |
| hypertension_times | 0.951884 | 0.934837 | 0.969243 | <0.0001 | 0.396652 | 20.289391 | <0.0001 |
| heart_type_disease_times | 1.007559 | 1.001634 | 1.013518 | 0.012331 | 1.614336 | 82.575908 | <0.0001 |
| neurological_type_disease_times | 1.039588 | 1.028581 | 1.050712 | <0.0001 | 1.358472 | 69.488047 | <0.0001 |
| diabetes_times | 1.009383 | 1.000242 | 1.018607 | 0.044202 | 0.274544 | 14.043379 | 0.000179 |
| hyperlipidemia_times | 1.008065 | 0.986478 | 1.030125 | 0.467041 | 1.277281 | 65.335009 | <0.0001 |
| clopidogrel_mean | 1.001339 | 1.000488 | 1.002191 | 0.002042 | 0.798571 | 40.848190 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.150833 | 1.056880 | 1.253139 | 0.001225 | 0.068799 | 3.518327 | 0.060696 |
| age | 1.055458 | 1.052408 | 1.058517 | < 0.0001 | 11.845117 | 605.745982 | < 0.0001 |
| with_psychosis | 1.409196 | 1.266835 | 1.567554 | < 0.0001 | 0.109649 | 5.607320 | 0.017887 |
| hypertension_times | 0.951272 | 0.934247 | 0.968607 | < 0.0001 | 0.378086 | 19.334873 | < 0.0001 |
| heart_type_disease_times | 1.008359 | 1.002466 | 1.014286 | 0.005375 | 1.798467 | 91.971600 | < 0.0001 |
| neurological_type_disease_times | 1.039355 | 1.028311 | 1.050517 | < 0.0001 | 1.334090 | 68.223855 | < 0.0001 |
| diabetes_times | 1.009502 | 1.000364 | 1.018723 | 0.041513 | 0.268775 | 13.744840 | 0.000210 |
| hyperlipidemia_times | 1.009121 | 0.987608 | 1.031103 | 0.408905 | 1.329153 | 67.971418 | < 0.0001 |
| clopidogrel_max | 1.000364 | 0.999807 | 1.000920 | 0.200265 | 0.274190 | 14.021772 | 0.000181 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.144206 | 1.050766 | 1.245956 | 0.001940 | 0.085978 | 4.398415 | 0.035975 |
| age | 1.055236 | 1.052180 | 1.058301 | < 0.0001 | 11.429362 | 584.694233 | < 0.0001 |
| with_psychosis | 1.415151 | 1.272152 | 1.574225 | < 0.0001 | 0.113330 | 5.797639 | 0.016049 |
| hypertension_times | 0.951977 | 0.934908 | 0.969357 | < 0.0001 | 0.404421 | 20.689049 | < 0.0001 |
| heart_type_disease_times | 1.007521 | 1.001612 | 1.013464 | 0.012534 | 1.560957 | 79.854216 | < 0.0001 |
| neurological_type_disease_times | 1.039521 | 1.028545 | 1.050614 | < 0.0001 | 1.368354 | 70.001157 | < 0.0001 |
| diabetes_times | 1.009211 | 1.000082 | 1.018423 | 0.047967 | 0.286346 | 14.648639 | 0.000130 |
| hyperlipidemia_times | 1.007421 | 0.985792 | 1.029524 | 0.504322 | 1.241655 | 63.519623 | < 0.0001 |
| clopidogrel_min | 1.001937 | 1.000907 | 1.002968 | 0.000226 | 1.028324 | 52.606206 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.143728 | 1.050308 | 1.245458 | 0.002009 | 0.083838 | 4.288961 | 0.038363 |
| age | 1.055214 | 1.052159 | 1.058278 | < 0.0001 | 11.463721 | 586.456172 | < 0.0001 |
| with_psychosis | 1.415103 | 1.272119 | 1.574158 | < 0.0001 | 0.114107 | 5.837454 | 0.015690 |
| hypertension_times | 0.951946 | 0.934892 | 0.969310 | < 0.0001 | 0.399607 | 20.442942 | < 0.0001 |
| heart_type_disease_times | 1.007455 | 1.001542 | 1.013402 | 0.013396 | 1.602564 | 81.983308 | < 0.0001 |
| neurological_type_disease_times | 1.039558 | 1.028566 | 1.050666 | < 0.0001 | 1.362071 | 69.680252 | < 0.0001 |
| diabetes_times | 1.009300 | 1.000167 | 1.018516 | 0.045934 | 0.277607 | 14.201682 | 0.000164 |
| hyperlipidemia_times | 1.007894 | 0.986305 | 1.029956 | 0.476609 | 1.269562 | 64.947697 | < 0.0001 |
| clopidogrel_median | 1.001665 | 1.000822 | 1.002509 | 0.000108 | 1.043510 | 53.383442 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.148911 | 1.055207 | 1.250936 | 0.001384 | 0.067988 | 3.477022 | 0.062229 |
| age | 1.055391 | 1.052343 | 1.058448 | < 0.0001 | 11.768716 | 601.872647 | < 0.0001 |
| with_psychosis | 1.406038 | 1.264023 | 1.564009 | < 0.0001 | 0.100434 | 5.136352 | 0.023432 |
| hypertension_times | 0.951461 | 0.934393 | 0.968841 | < 0.0001 | 0.387622 | 19.823683 | < 0.0001 |
| heart_type_disease_times | 1.007795 | 1.001939 | 1.013685 | 0.009016 | 1.783499 | 91.211253 | < 0.0001 |
| neurological_type_disease_times | 1.038644 | 1.027607 | 1.049799 | < 0.0001 | 1.312577 | 67.127480 | < 0.0001 |
| diabetes_times | 1.009040 | 0.999874 | 1.018290 | 0.053241 | 0.301829 | 15.436060 | < 0.0001 |
| hyperlipidemia_times | 1.009491 | 0.987918 | 1.031535 | 0.391404 | 1.366923 | 69.906817 | < 0.0001 |
| clopidogrel_hours_diff_mean | 1.001622 | 1.000883 | 1.002361 | < 0.0001 | 0.392075 | 20.051388 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.152082 | 1.058114 | 1.254394 | 0.001109 | 0.061938 | 3.167098 | 0.075139 |
| age | 1.055501 | 1.052454 | 1.058557 | < 0.0001 | 12.046863 | 615.993597 | < 0.0001 |
| with_psychosis | 1.405817 | 1.263820 | 1.563769 | < 0.0001 | 0.103326 | 5.283392 | 0.021532 |
| hypertension_times | 0.951232 | 0.934169 | 0.968606 | < 0.0001 | 0.367193 | 18.775742 | < 0.0001 |
| heart_type_disease_times | 1.008356 | 1.002467 | 1.014280 | 0.005363 | 1.948775 | 99.646940 | < 0.0001 |
| neurological_type_disease_times | 1.038659 | 1.027649 | 1.049787 | < 0.0001 | 1.308009 | 66.882548 | < 0.0001 |
| diabetes_times | 1.009035 | 0.999867 | 1.018286 | 0.053430 | 0.281825 | 14.410585 | 0.000147 |
| hyperlipidemia_times | 1.009475 | 0.987948 | 1.031470 | 0.391206 | 1.377406 | 70.431049 | < 0.0001 |
| clopidogrel_hours_diff_max | 1.000446 | 0.999792 | 1.001100 | 0.181625 | 0.036809 | 1.882154 | 0.170092 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.145205 | 1.051745 | 1.246969 | 0.001800 | 0.074520 | 3.812180 | 0.050884 |
| age | 1.055167 | 1.052115 | 1.058228 | < 0.0001 | 11.497637 | 588.176318 | < 0.0001 |
| with_psychosis | 1.406075 | 1.264010 | 1.564106 | < 0.0001 | 0.103084 | 5.273370 | 0.021656 |
| hypertension_times | 0.951621 | 0.934630 | 0.968922 | < 0.0001 | 0.398635 | 20.392682 | < 0.0001 |
| heart_type_disease_times | 1.007921 | 1.002095 | 1.013781 | 0.007643 | 1.833326 | 93.786130 | < 0.0001 |
| neurological_type_disease_times | 1.039358 | 1.028264 | 1.050571 | < 0.0001 | 1.325140 | 67.789239 | < 0.0001 |
| diabetes_times | 1.009412 | 1.000264 | 1.018644 | 0.043722 | 0.289694 | 14.819674 | 0.000118 |
| hyperlipidemia_times | 1.010021 | 0.988506 | 1.032004 | 0.364075 | 1.371867 | 70.179628 | < 0.0001 |
| clopidogrel_hours_diff_min | 1.003545 | 1.002390 | 1.004702 | < 0.0001 | 0.990126 | 50.651150 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.148860 | 1.055166 | 1.250873 | 0.001388 | 0.069108 | 3.534474 | 0.060108 |
| age | 1.055390 | 1.052342 | 1.058447 | < 0.0001 | 11.718383 | 599.329246 | < 0.0001 |
| with_psychosis | 1.407005 | 1.264891 | 1.565085 | < 0.0001 | 0.100769 | 5.153756 | 0.023198 |
| hypertension_times | 0.951358 | 0.934305 | 0.968721 | < 0.0001 | 0.390393 | 19.966416 | < 0.0001 |
| heart_type_disease_times | 1.007898 | 1.002060 | 1.013770 | 0.007951 | 1.789033 | 91.498959 | < 0.0001 |
| neurological_type_disease_times | 1.038689 | 1.027635 | 1.049861 | < 0.0001 | 1.311170 | 67.058983 | < 0.0001 |
| diabetes_times | 1.009179 | 1.000027 | 1.018415 | 0.049315 | 0.301230 | 15.406208 | < 0.0001 |
| hyperlipidemia_times | 1.009632 | 0.988090 | 1.031643 | 0.383703 | 1.366738 | 69.900971 | < 0.0001 |
| clopidogrel_hours_diff_median | 1.001709 | 1.001024 | 1.002395 | < 0.0001 | 0.500040 | 25.574222 | < 0.0001 |

Apixaban

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.049378 | 0.963065 | 1.143427 | 0.271078 | 0.328361 | 16.980287 | < 0.0001 |
| age | 1.041047 | 1.037617 | 1.044489 | < 0.0001 | 1.457742 | 75.383189 | < 0.0001 |
| with_psychosis | 0.970037 | 0.871012 | 1.080321 | 0.579773 | 0.014757 | 0.763124 | 0.382355 |
| with_hypertension | 1.290841 | 1.131091 | 1.473153 | 0.000152 | 0.576664 | 29.820610 | < 0.0001 |
| with_heart_type_disease | 1.631701 | 1.470342 | 1.810768 | < 0.0001 | 4.448127 | 230.022835 | < 0.0001 |
| with_neurological_type_disease | 3.062907 | 2.801123 | 3.349156 | < 0.0001 | 17.799061 | 920.430161 | < 0.0001 |
| with_diabetes | 1.162516 | 1.061787 | 1.272801 | 0.001128 | 0.635300 | 32.852806 | < 0.0001 |
| with_hyperlipidemia | 1.500737 | 1.351670 | 1.666243 | < 0.0001 | 4.770652 | 246.701347 | < 0.0001 |
| apixaban | 0.344893 | 0.264705 | 0.449372 | < 0.0001 | 1.078758 | 55.785047 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.155465 | 1.061298 | 1.257988 | 0.000863 | 0.066313 | 3.393318 | 0.065464 |
| age | 1.056088 | 1.053048 | 1.059138 | < 0.0001 | 12.291026 | 628.944643 | < 0.0001 |
| with_psychosis | 1.440700 | 1.295200 | 1.602544 | < 0.0001 | 0.159039 | 8.138192 | 0.004335 |
| hypertension_times | 0.950801 | 0.933793 | 0.968119 | < 0.0001 | 0.384432 | 19.671810 | < 0.0001 |
| heart_type_disease_times | 1.012101 | 1.006464 | 1.017770 | < 0.0001 | 2.757278 | 141.092805 | < 0.0001 |
| neurological_type_disease_times | 1.037427 | 1.026587 | 1.048382 | < 0.0001 | 1.329404 | 68.026991 | < 0.0001 |
| diabetes_times | 1.007990 | 0.998845 | 1.017218 | 0.087005 | 0.297795 | 15.238487 | < 0.0001 |
| hyperlipidemia_times | 1.011227 | 0.990014 | 1.032895 | 0.302000 | 1.389559 | 71.105192 | < 0.0001 |
| apixaban_count | 0.692668 | 0.611408 | 0.784727 | < 0.0001 | 1.597445 | 81.742934 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.159270 | 1.064782 | 1.262144 | 0.000657 | 0.059947 | 3.066361 | 0.079931 |
| age | 1.055971 | 1.052932 | 1.059019 | < 0.0001 | 12.443375 | 636.496106 | < 0.0001 |
| with_psychosis | 1.433048 | 1.288277 | 1.594087 | < 0.0001 | 0.138069 | 7.062419 | 0.007873 |
| hypertension_times | 0.950316 | 0.933300 | 0.967642 | < 0.0001 | 0.357335 | 18.278203 | < 0.0001 |
| heart_type_disease_times | 1.011128 | 1.005433 | 1.016855 | 0.000123 | 2.382273 | 121.856601 | < 0.0001 |
| neurological_type_disease_times | 1.037795 | 1.026893 | 1.048813 | < 0.0001 | 1.311364 | 67.078126 | < 0.0001 |
| diabetes_times | 1.008536 | 0.999353 | 1.017804 | 0.068572 | 0.281788 | 14.413858 | 0.000147 |
| hyperlipidemia_times | 1.011379 | 0.990101 | 1.033114 | 0.296962 | 1.404976 | 71.866512 | < 0.0001 |
| apixaban_mean | 0.841735 | 0.794196 | 0.892119 | < 0.0001 | 0.789585 | 40.388355 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.159083 | 1.064611 | 1.261939 | 0.000666 | 0.060372 | 3.088222 | 0.078864 |
| age | 1.055979 | 1.052940 | 1.059027 | < 0.0001 | 12.449678 | 636.837070 | < 0.0001 |
| with_psychosis | 1.433870 | 1.289026 | 1.594990 | < 0.0001 | 0.140183 | 7.170748 | 0.007411 |
| hypertension_times | 0.950439 | 0.933421 | 0.967766 | < 0.0001 | 0.360527 | 18.441989 | < 0.0001 |
| heart_type_disease_times | 1.011189 | 1.005494 | 1.016916 | 0.000113 | 2.393065 | 122.412222 | < 0.0001 |
| neurological_type_disease_times | 1.037763 | 1.026868 | 1.048775 | < 0.0001 | 1.312791 | 67.153083 | < 0.0001 |
| diabetes_times | 1.008430 | 0.999235 | 1.017710 | 0.072445 | 0.283612 | 14.507597 | 0.000140 |
| hyperlipidemia_times | 1.011436 | 0.990153 | 1.033177 | 0.294650 | 1.407023 | 71.973293 | < 0.0001 |
| apixaban_max | 0.849103 | 0.803975 | 0.896765 | < 0.0001 | 0.850953 | 43.528686 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.159460 | 1.064953 | 1.262353 | 0.000648 | 0.059560 | 3.046448 | 0.080917 |
| age | 1.055948 | 1.052908 | 1.058996 | < 0.0001 | 12.423570 | 635.457390 | < 0.0001 |
| with_psychosis | 1.430860 | 1.286303 | 1.591663 | < 0.0001 | 0.134633 | 6.886385 | 0.008687 |
| hypertension_times | 0.950246 | 0.933239 | 0.967564 | < 0.0001 | 0.355425 | 18.179765 | < 0.0001 |
| heart_type_disease_times | 1.011009 | 1.005309 | 1.016742 | 0.000148 | 2.362294 | 120.829795 | < 0.0001 |
| neurological_type_disease_times | 1.037869 | 1.026949 | 1.048904 | < 0.0001 | 1.309045 | 66.956772 | < 0.0001 |
| diabetes_times | 1.008624 | 0.999448 | 1.017885 | 0.065554 | 0.280371 | 14.340766 | 0.000153 |
| hyperlipidemia_times | 1.011205 | 0.989919 | 1.032948 | 0.304648 | 1.402142 | 71.718645 | < 0.0001 |
| apixaban_min | 0.837949 | 0.787642 | 0.891470 | < 0.0001 | 0.704587 | 36.039174 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.159190 | 1.064708 | 1.262056 | 0.000661 | 0.059935 | 3.065712 | 0.079963 |
| age | 1.055963 | 1.052924 | 1.059011 | < 0.0001 | 12.437463 | 636.187706 | < 0.0001 |
| with_psychosis | 1.432681 | 1.287943 | 1.593685 | < 0.0001 | 0.137488 | 7.032637 | 0.008005 |
| hypertension_times | 0.950285 | 0.933269 | 0.967612 | < 0.0001 | 0.356513 | 18.235965 | < 0.0001 |
| heart_type_disease_times | 1.011081 | 1.005387 | 1.016807 | 0.000131 | 2.378647 | 121.670006 | < 0.0001 |
| neurological_type_disease_times | 1.037800 | 1.026896 | 1.048821 | < 0.0001 | 1.311031 | 67.060425 | < 0.0001 |
| diabetes_times | 1.008578 | 0.999400 | 1.017840 | 0.067062 | 0.281669 | 14.407640 | 0.000147 |
| hyperlipidemia_times | 1.011423 | 0.990150 | 1.033153 | 0.294988 | 1.406351 | 71.936151 | < 0.0001 |
| apixaban_median | 0.844241 | 0.796762 | 0.894550 | < 0.0001 | 0.769760 | 39.373951 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154075 | 1.060013 | 1.256483 | 0.000955 | 0.063854 | 3.266630 | 0.070706 |
| age | 1.056112 | 1.053069 | 1.059164 | < 0.0001 | 12.455668 | 637.204234 | < 0.0001 |
| with_psychosis | 1.437585 | 1.292362 | 1.599126 | < 0.0001 | 0.144755 | 7.405341 | 0.006504 |
| hypertension_times | 0.950971 | 0.933912 | 0.968342 | < 0.0001 | 0.366034 | 18.725462 | < 0.0001 |
| heart_type_disease_times | 1.011469 | 1.005784 | 1.017186 | < 0.0001 | 2.445448 | 125.103672 | < 0.0001 |
| neurological_type_disease_times | 1.037848 | 1.026989 | 1.048822 | < 0.0001 | 1.336289 | 68.361561 | < 0.0001 |
| diabetes_times | 1.008222 | 0.999066 | 1.017462 | 0.078539 | 0.287231 | 14.694104 | 0.000127 |
| hyperlipidemia_times | 1.010669 | 0.989417 | 1.032378 | 0.327707 | 1.389350 | 71.076066 | < 0.0001 |
| apixaban_hours_diff_mean | 0.984913 | 0.979823 | 0.990030 | < 0.0001 | 1.051642 | 53.799651 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.153009 | 1.059035 | 1.255323 | 0.001030 | 0.065792 | 3.366164 | 0.066551 |
| age | 1.056110 | 1.053068 | 1.059161 | < 0.0001 | 12.392070 | 634.028469 | < 0.0001 |
| with_psychosis | 1.439885 | 1.294443 | 1.601669 | < 0.0001 | 0.153922 | 7.875263 | 0.005012 |
| hypertension_times | 0.951138 | 0.934086 | 0.968503 | < 0.0001 | 0.377689 | 19.324073 | < 0.0001 |
| heart_type_disease_times | 1.011810 | 1.006148 | 1.017503 | < 0.0001 | 2.553569 | 130.650907 | < 0.0001 |
| neurological_type_disease_times | 1.037700 | 1.026863 | 1.048652 | < 0.0001 | 1.347080 | 68.922069 | < 0.0001 |
| diabetes_times | 1.008073 | 0.998938 | 1.017291 | 0.083424 | 0.291397 | 14.909062 | 0.000113 |
| hyperlipidemia_times | 1.010603 | 0.989383 | 1.032277 | 0.329991 | 1.376924 | 70.449008 | < 0.0001 |
| apixaban_hours_diff_max | 0.989728 | 0.986253 | 0.993216 | < 0.0001 | 1.309785 | 67.013882 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154469 | 1.060354 | 1.256938 | 0.000931 | 0.060945 | 3.116900 | 0.077492 |
| age | 1.055913 | 1.052867 | 1.058967 | < 0.0001 | 12.307175 | 629.399005 | < 0.0001 |
| with_psychosis | 1.420357 | 1.276850 | 1.579993 | < 0.0001 | 0.117574 | 6.012837 | 0.014204 |
| hypertension_times | 0.950780 | 0.933742 | 0.968128 | < 0.0001 | 0.357733 | 18.294768 | < 0.0001 |
| heart_type_disease_times | 1.009898 | 1.004168 | 1.015660 | 0.000692 | 2.230560 | 114.072649 | < 0.0001 |
| neurological_type_disease_times | 1.038552 | 1.027590 | 1.049630 | < 0.0001 | 1.318279 | 67.417872 | < 0.0001 |
| diabetes_times | 1.009068 | 0.999919 | 1.018301 | 0.052061 | 0.272509 | 13.936341 | 0.000189 |
| hyperlipidemia_times | 1.010380 | 0.989026 | 1.032196 | 0.343371 | 1.390661 | 71.119564 | < 0.0001 |
| apixaban_hours_diff_min | 0.986364 | 0.979831 | 0.992940 | < 0.0001 | 0.354088 | 18.108337 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154981 | 1.060847 | 1.257468 | 0.000895 | 0.062892 | 3.217205 | 0.072871 |
| age | 1.056085 | 1.053042 | 1.059137 | <0.0001 | 12.439929 | 636.360551 | <0.0001 |
| with_psychosis | 1.435185 | 1.290201 | 1.596461 | <0.0001 | 0.139735 | 7.148103 | 0.007505 |
| hypertension_times | 0.950988 | 0.933927 | 0.968361 | <0.0001 | 0.363725 | 18.606218 | <0.0001 |
| heart_type_disease_times | 1.011242 | 1.005546 | 1.016969 | 0.000105 | 2.400921 | 122.818322 | <0.0001 |
| neurological_type_disease_times | 1.037982 | 1.027110 | 1.048969 | <0.0001 | 1.331587 | 68.116929 | <0.0001 |
| diabetes_times | 1.008319 | 0.999155 | 1.017567 | 0.075323 | 0.285130 | 14.585734 | 0.000134 |
| hyperlipidemia_times | 1.010553 | 0.989277 | 1.032285 | 0.333576 | 1.392367 | 71.226073 | <0.0001 |
| apixaban_hours_diff_median | 0.984671 | 0.979296 | 0.990075 | <0.0001 | 0.924350 | 47.284818 | <0.0001 |

Rivaroxaban

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.046866 | 0.960804 | 1.140637 | 0.295367 | 0.313077 | 16.182917 | <0.0001 |
| age | 1.040330 | 1.036898 | 1.043773 | <0.0001 | 1.381258 | 71.397011 | <0.0001 |
| with_psychosis | 0.953917 | 0.856563 | 1.062336 | 0.390349 | 0.029839 | 1.542375 | 0.214267 |
| with_hypertension | 1.288203 | 1.128340 | 1.470715 | 0.000180 | 0.568803 | 29.401320 | <0.0001 |
| with_heart_type_disease | 1.583819 | 1.426661 | 1.758289 | <0.0001 | 4.145000 | 214.254393 | <0.0001 |
| with_neurological_type_disease | 3.040460 | 2.780666 | 3.324526 | <0.0001 | 17.725516 | 916.229221 | <0.0001 |
| with_diabetes | 1.163114 | 1.062345 | 1.273442 | 0.001083 | 0.639384 | 33.049683 | <0.0001 |
| with_hyperlipidemia | 1.492533 | 1.343978 | 1.657508 | <0.0001 | 4.704994 | 243.200396 | <0.0001 |
| rivaroxaban | 0.580617 | 0.427386 | 0.788785 | 0.000506 | 0.175011 | 9.046314 | 0.002633 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154271 | 1.060169 | 1.256724 | 0.000944 | 0.059879 | 3.061958 | 0.080148 |
| age | 1.055522 | 1.052477 | 1.058576 | <0.0001 | 12.095482 | 618.508460 | <0.0001 |
| with_psychosis | 1.409505 | 1.267117 | 1.567894 | <0.0001 | 0.113208 | 5.788952 | 0.016129 |
| hypertension_times | 0.950959 | 0.933960 | 0.968266 | <0.0001 | 0.366051 | 18.718208 | <0.0001 |
| heart_type_disease_times | 1.009356 | 1.003571 | 1.015174 | 0.001495 | 2.247329 | 114.918302 | <0.0001 |
| neurological_type_disease_times | 1.038940 | 1.027930 | 1.050069 | <0.0001 | 1.320360 | 67.517269 | <0.0001 |
| diabetes_times | 1.009165 | 1.000007 | 1.018408 | 0.049829 | 0.282830 | 14.462660 | 0.000143 |
| hyperlipidemia_times | 1.010225 | 0.988741 | 1.032176 | 0.353638 | 1.395367 | 71.352763 | <0.0001 |
| rivaroxaban_count | 0.953305 | 0.871727 | 1.042518 | 0.294780 | 0.134956 | 6.901050 | 0.008616 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.156092 | 1.061841 | 1.258709 | 0.000829 | 0.057084 | 2.918999 | 0.087545 |
| age | 1.055559 | 1.052517 | 1.058610 | <0.0001 | 12.184952 | 623.081783 | <0.0001 |
| with_psychosis | 1.411345 | 1.268771 | 1.569941 | <0.0001 | 0.113491 | 5.803424 | 0.015997 |
| hypertension_times | 0.950793 | 0.933796 | 0.968099 | <0.0001 | 0.357023 | 18.256520 | <0.0001 |
| heart_type_disease_times | 1.009508 | 1.003757 | 1.015292 | 0.001168 | 2.215376 | 113.284023 | <0.0001 |
| neurological_type_disease_times | 1.038721 | 1.027703 | 1.049856 | <0.0001 | 1.307273 | 66.847869 | <0.0001 |
| diabetes_times | 1.009060 | 0.999919 | 1.018283 | 0.052066 | 0.275342 | 14.079728 | 0.000175 |
| hyperlipidemia_times | 1.010563 | 0.989080 | 1.032513 | 0.337844 | 1.395537 | 71.361292 | <0.0001 |
| rivaroxaban_mean | 0.981226 | 0.964822 | 0.997908 | 0.027564 | 0.128923 | 6.592520 | 0.010242 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.156108 | 1.061857 | 1.258725 | 0.000828 | 0.057046 | 2.917068 | 0.087650 |
| age | 1.055560 | 1.052518 | 1.058610 | < 0.0001 | 12.187477 | 623.214125 | < 0.0001 |
| with_psychosis | 1.411525 | 1.268935 | 1.570138 | < 0.0001 | 0.113967 | 5.827751 | 0.015777 |
| hypertension_times | 0.950794 | 0.933799 | 0.968100 | < 0.0001 | 0.357000 | 18.255390 | < 0.0001 |
| heart_type_disease_times | 1.009528 | 1.003777 | 1.015311 | 0.001139 | 2.219534 | 113.497216 | < 0.0001 |
| neurological_type_disease_times | 1.038721 | 1.027706 | 1.049855 | < 0.0001 | 1.307977 | 66.884215 | < 0.0001 |
| diabetes_times | 1.009035 | 0.999894 | 1.018260 | 0.052737 | 0.275862 | 14.106377 | 0.000173 |
| hyperlipidemia_times | 1.010594 | 0.989109 | 1.032546 | 0.336454 | 1.396582 | 71.415071 | < 0.0001 |
| rivaroxaban_max | 0.980961 | 0.964891 | 0.997298 | 0.022550 | 0.139778 | 7.147659 | 0.007507 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.155985 | 1.061741 | 1.258594 | 0.000836 | 0.057211 | 2.925482 | 0.087194 |
| age | 1.055561 | 1.052519 | 1.058611 | < 0.0001 | 12.182018 | 622.927119 | < 0.0001 |
| with_psychosis | 1.411027 | 1.268483 | 1.569590 | < 0.0001 | 0.112779 | 5.766974 | 0.016332 |
| hypertension_times | 0.950798 | 0.933802 | 0.968104 | < 0.0001 | 0.357079 | 18.259217 | < 0.0001 |
| heart_type_disease_times | 1.009475 | 1.003724 | 1.015258 | 0.001215 | 2.208295 | 112.921120 | < 0.0001 |
| neurological_type_disease_times | 1.038737 | 1.027719 | 1.049874 | < 0.0001 | 1.306933 | 66.829976 | < 0.0001 |
| diabetes_times | 1.009103 | 0.999965 | 1.018323 | 0.050879 | 0.274379 | 14.030342 | 0.000180 |
| hyperlipidemia_times | 1.010484 | 0.989012 | 1.032422 | 0.341249 | 1.393657 | 71.264586 | < 0.0001 |
| rivaroxaban_min | 0.981670 | 0.964881 | 0.998751 | 0.035552 | 0.113348 | 5.796062 | 0.016064 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.156155 | 1.061899 | 1.258778 | 0.000825 | 0.057019 | 2.915705 | 0.087724 |
| age | 1.055559 | 1.052517 | 1.058609 | < 0.0001 | 12.185656 | 623.118857 | < 0.0001 |
| with_psychosis | 1.411407 | 1.268826 | 1.570010 | < 0.0001 | 0.113625 | 5.810275 | 0.015934 |
| hypertension_times | 0.950794 | 0.933797 | 0.968101 | < 0.0001 | 0.357050 | 18.257925 | < 0.0001 |
| heart_type_disease_times | 1.009513 | 1.003763 | 1.015297 | 0.001160 | 2.216737 | 113.353809 | < 0.0001 |
| neurological_type_disease_times | 1.038705 | 1.027686 | 1.049841 | < 0.0001 | 1.306994 | 66.833714 | < 0.0001 |
| diabetes_times | 1.009052 | 0.999912 | 1.018277 | 0.052257 | 0.275542 | 14.089956 | 0.000174 |
| hyperlipidemia_times | 1.010583 | 0.989098 | 1.032535 | 0.336974 | 1.395866 | 71.378220 | < 0.0001 |
| rivaroxaban_median | 0.981041 | 0.964655 | 0.997705 | 0.025927 | 0.132640 | 6.782626 | 0.009206 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154491 | 1.060370 | 1.256966 | 0.000930 | 0.059833 | 3.059445 | 0.080272 |
| age | 1.055570 | 1.052526 | 1.058623 | < 0.0001 | 12.153150 | 621.428572 | < 0.0001 |
| with_psychosis | 1.410404 | 1.267885 | 1.568943 | < 0.0001 | 0.110799 | 5.665516 | 0.017303 |
| hypertension_times | 0.950967 | 0.933974 | 0.968270 | < 0.0001 | 0.360064 | 18.411190 | < 0.0001 |
| heart_type_disease_times | 1.009214 | 1.003457 | 1.015003 | 0.001675 | 2.165631 | 110.735500 | < 0.0001 |
| neurological_type_disease_times | 1.038963 | 1.027948 | 1.050095 | < 0.0001 | 1.311185 | 67.044970 | < 0.0001 |
| diabetes_times | 1.009333 | 1.000208 | 1.018541 | 0.044979 | 0.270477 | 13.830342 | 0.000200 |
| hyperlipidemia_times | 1.009973 | 0.988531 | 1.031880 | 0.364749 | 1.385237 | 70.831518 | < 0.0001 |
| rivaroxaban_hours_diff_mean | 0.997521 | 0.993299 | 1.001761 | 0.251385 | 0.037424 | 1.913585 | 0.166568 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154776 | 1.060635 | 1.257274 | 0.000911 | 0.059526 | 3.043863 | 0.081046 |
| age | 1.055552 | 1.052508 | 1.058604 | < 0.0001 | 12.152015 | 621.390864 | < 0.0001 |
| with_psychosis | 1.4111561 | 1.268941 | 1.570209 | < 0.0001 | 0.114616 | 5.860885 | 0.015483 |
| hypertension_times | 0.951020 | 0.934028 | 0.968321 | < 0.0001 | 0.362186 | 18.520316 | < 0.0001 |
| heart_type_disease_times | 1.009314 | 1.003552 | 1.015109 | 0.001504 | 2.198354 | 112.412395 | < 0.0001 |
| neurological_type_disease_times | 1.038999 | 1.027995 | 1.050121 | < 0.0001 | 1.323849 | 67.694735 | < 0.0001 |
| diabetes_times | 1.009209 | 1.000074 | 1.018428 | 0.048159 | 0.274715 | 14.047512 | 0.000178 |
| hyperlipidemia_times | 1.010030 | 0.988576 | 1.031950 | 0.362258 | 1.384566 | 70.799524 | < 0.0001 |
| rivaroxaban_hours_diff_max | 0.997909 | 0.995019 | 1.000808 | 0.157355 | 0.106238 | 5.432442 | 0.019768 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.153924 | 1.059848 | 1.256350 | 0.000968 | 0.060511 | 3.094074 | 0.078581 |
| age | 1.055558 | 1.052513 | 1.058612 | < 0.0001 | 12.111937 | 619.310477 | < 0.0001 |
| with_psychosis | 1.407162 | 1.264977 | 1.565329 | < 0.0001 | 0.104250 | 5.330512 | 0.020957 |
| hypertension_times | 0.950902 | 0.933903 | 0.968211 | < 0.0001 | 0.359716 | 18.393080 | < 0.0001 |
| heart_type_disease_times | 1.009046 | 1.003284 | 1.014840 | 0.002055 | 2.132980 | 109.064054 | < 0.0001 |
| neurological_type_disease_times | 1.039031 | 1.028003 | 1.050177 | < 0.0001 | 1.307998 | 66.880875 | < 0.0001 |
| diabetes_times | 1.009511 | 1.000392 | 1.018713 | 0.040884 | 0.266436 | 13.623452 | 0.000223 |
| hyperlipidemia_times | 1.009786 | 0.988356 | 1.031681 | 0.373579 | 1.383606 | 70.746854 | < 0.0001 |
| rivaroxaban_hours_diff_min | 0.999635 | 0.994873 | 1.004420 | 0.880838 | 0.000934 | 0.047773 | 0.826985 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154271 | 1.060168 | 1.256728 | 0.000945 | 0.060034 | 3.069718 | 0.079766 |
| age | 1.055570 | 1.052526 | 1.058623 | < 0.0001 | 12.143978 | 620.953820 | < 0.0001 |
| with_psychosis | 1.409476 | 1.267048 | 1.567914 | < 0.0001 | 0.108753 | 5.560834 | 0.018368 |
| hypertension_times | 0.950953 | 0.933957 | 0.968257 | < 0.0001 | 0.359872 | 18.401211 | < 0.0001 |
| heart_type_disease_times | 1.009161 | 1.003403 | 1.014952 | 0.001787 | 2.154014 | 110.140445 | < 0.0001 |
| neurological_type_disease_times | 1.038959 | 1.027938 | 1.050097 | < 0.0001 | 1.309288 | 66.947391 | < 0.0001 |
| diabetes_times | 1.009393 | 1.000271 | 1.018597 | 0.043533 | 0.269129 | 13.761284 | 0.000208 |
| hyperlipidemia_times | 1.009931 | 0.988494 | 1.031834 | 0.366648 | 1.385079 | 70.822781 | < 0.0001 |
| rivaroxaban_hours_diff_median | 0.998020 | 0.993747 | 1.002312 | 0.365428 | 0.017861 | 0.913287 | 0.339246 |

Dabigatran etexilate

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.046574 | 0.960530 | 1.140325 | 0.298353 | 0.318959 | 16.485721 | <0.0001 |
| age | 1.040397 | 1.036963 | 1.043843 | <0.0001 | 1.379797 | 71.316117 | <0.0001 |
| with_psychosis | 0.947614 | 0.850905 | 1.055313 | 0.327224 | 0.035847 | 1.852777 | 0.173464 |
| with_hypertension | 1.290347 | 1.130293 | 1.473066 | 0.000162 | 0.567038 | 29.307875 | <0.0001 |
| with_heart_type_disease | 1.564939 | 1.409809 | 1.737139 | <0.0001 | 3.976857 | 205.547594 | <0.0001 |
| with_neurological_type_disease | 3.046080 | 2.785774 | 3.330710 | <0.0001 | 17.736723 | 916.739207 | <0.0001 |
| with_diabetes | 1.165735 | 1.064750 | 1.276297 | 0.000910 | 0.648480 | 33.517277 | <0.0001 |
| with_hyperlipidemia | 1.486954 | 1.338978 | 1.651283 | <0.0001 | 4.668456 | 241.293536 | <0.0001 |
| dabigatran etexilate | 0.786773 | 0.516416 | 1.198669 | 0.264256 | 0.017640 | 0.911743 | 0.339655 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.153901 | 1.059827 | 1.256325 | 0.000970 | 0.060580 | 3.097579 | 0.078412 |
| age | 1.055554 | 1.052508 | 1.058608 | <0.0001 | 12.129333 | 620.202483 | <0.0001 |
| with_psychosis | 1.406808 | 1.264716 | 1.564865 | <0.0001 | 0.105036 | 5.370729 | 0.020479 |
| hypertension_times | 0.950903 | 0.933904 | 0.968212 | <0.0001 | 0.359177 | 18.365613 | <0.0001 |
| heart_type_disease_times | 1.009033 | 1.003247 | 1.014853 | 0.002180 | 2.087974 | 106.763227 | <0.0001 |
| neurological_type_disease_times | 1.039044 | 1.028011 | 1.050195 | <0.0001 | 1.309672 | 66.966743 | <0.0001 |
| diabetes_times | 1.009521 | 1.000396 | 1.018730 | 0.040819 | 0.263738 | 13.485550 | 0.000241 |
| hyperlipidemia_times | 1.009770 | 0.988334 | 1.031671 | 0.374492 | 1.381754 | 70.652471 | <0.0001 |
| dabigatran etexilate_count | 0.999950 | 0.886671 | 1.127702 | 0.999352 | 0.009381 | 0.479683 | 0.488568 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154120 | 1.060008 | 1.256587 | 0.000957 | 0.060927 | 3.115351 | 0.077561 |
| age | 1.055554 | 1.052509 | 1.058607 | <0.0001 | 12.114257 | 619.431696 | <0.0001 |
| with_psychosis | 1.406696 | 1.264617 | 1.564737 | <0.0001 | 0.105198 | 5.379056 | 0.020382 |
| hypertension_times | 0.950896 | 0.933899 | 0.968203 | <0.0001 | 0.359746 | 18.394720 | <0.0001 |
| heart_type_disease_times | 1.009079 | 1.003304 | 1.014887 | 0.002026 | 2.098920 | 107.322940 | <0.0001 |
| neurological_type_disease_times | 1.039024 | 1.027996 | 1.050170 | <0.0001 | 1.308873 | 66.925871 | <0.0001 |
| diabetes_times | 1.009487 | 1.000363 | 1.018695 | 0.041529 | 0.264141 | 13.506193 | 0.000238 |
| hyperlipidemia_times | 1.009788 | 0.988361 | 1.031680 | 0.373407 | 1.383461 | 70.739755 | <0.0001 |
| dabigatran etexilate_mean | 0.999688 | 0.996640 | 1.002744 | 0.841006 | 0.009671 | 0.494516 | 0.481921 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154187 | 1.060070 | 1.256659 | 0.000953 | 0.060862 | 3.112033 | 0.077719 |
| age | 1.055554 | 1.052510 | 1.058608 | < 0.0001 | 12.115179 | 619.478281 | < 0.0001 |
| with_psychosis | 1.406663 | 1.264589 | 1.564700 | < 0.0001 | 0.105184 | 5.378331 | 0.020390 |
| hypertension_times | 0.950892 | 0.933896 | 0.968199 | < 0.0001 | 0.359726 | 18.393678 | < 0.0001 |
| heart_type_disease_times | 1.009095 | 1.003320 | 1.014902 | 0.001988 | 2.101007 | 107.429526 | < 0.0001 |
| neurological_type_disease_times | 1.039017 | 1.027990 | 1.050162 | < 0.0001 | 1.308822 | 66.923215 | < 0.0001 |
| diabetes_times | 1.009476 | 1.000352 | 1.018684 | 0.041768 | 0.264353 | 13.517009 | 0.000237 |
| hyperlipidemia_times | 1.009796 | 0.988369 | 1.031687 | 0.373013 | 1.383451 | 70.739178 | < 0.0001 |
| dabigatran_etexilate_max | 0.999593 | 0.996586 | 1.002608 | 0.790931 | 0.007834 | 0.400567 | 0.526798 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154090 | 1.059979 | 1.256556 | 0.000960 | 0.060974 | 3.117775 | 0.077445 |
| age | 1.055554 | 1.052509 | 1.058607 | < 0.0001 | 12.113839 | 619.410595 | < 0.0001 |
| with_psychosis | 1.406721 | 1.264640 | 1.564765 | < 0.0001 | 0.105195 | 5.378863 | 0.020384 |
| hypertension_times | 0.950897 | 0.933900 | 0.968205 | < 0.0001 | 0.359778 | 18.396331 | < 0.0001 |
| heart_type_disease_times | 1.009071 | 1.003296 | 1.014879 | 0.002046 | 2.098674 | 107.310420 | < 0.0001 |
| neurological_type_disease_times | 1.039028 | 1.028000 | 1.050174 | < 0.0001 | 1.308851 | 66.924771 | < 0.0001 |
| diabetes_times | 1.009494 | 1.000370 | 1.018701 | 0.041377 | 0.264117 | 13.504945 | 0.000238 |
| hyperlipidemia_times | 1.009784 | 0.988356 | 1.031676 | 0.373641 | 1.383512 | 70.742373 | < 0.0001 |
| dabigatran_etexilate_min | 0.999737 | 0.996651 | 1.002833 | 0.867789 | 0.010575 | 0.540711 | 0.462140 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154080 | 1.059973 | 1.256543 | 0.000960 | 0.060940 | 3.115996 | 0.077530 |
| age | 1.055554 | 1.052509 | 1.058607 | < 0.0001 | 12.113817 | 619.409446 | < 0.0001 |
| with_psychosis | 1.406708 | 1.264627 | 1.564751 | < 0.0001 | 0.105219 | 5.380133 | 0.020369 |
| hypertension_times | 0.950898 | 0.933900 | 0.968205 | < 0.0001 | 0.359755 | 18.395184 | < 0.0001 |
| heart_type_disease_times | 1.009072 | 1.003297 | 1.014881 | 0.002044 | 2.097422 | 107.246372 | < 0.0001 |
| neurological_type_disease_times | 1.039027 | 1.027999 | 1.050173 | < 0.0001 | 1.308908 | 66.927714 | < 0.0001 |
| diabetes_times | 1.009492 | 1.000367 | 1.018700 | 0.041427 | 0.264009 | 13.499415 | 0.000239 |
| hyperlipidemia_times | 1.009785 | 0.988357 | 1.031678 | 0.373554 | 1.383459 | 70.739710 | < 0.0001 |
| dabigatran_etexilate_median | 0.999737 | 0.996709 | 1.002775 | 0.865252 | 0.010634 | 0.543748 | 0.460885 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.155290 | 1.061094 | 1.257848 | 0.000879 | 0.059613 | 3.048200 | 0.080830 |
| age | 1.055568 | 1.052524 | 1.058621 | < 0.0001 | 12.146867 | 621.107806 | < 0.0001 |
| with_psychosis | 1.406772 | 1.264693 | 1.564813 | < 0.0001 | 0.105756 | 5.407616 | 0.020051 |
| hypertension_times | 0.950858 | 0.933871 | 0.968154 | < 0.0001 | 0.359492 | 18.381968 | < 0.0001 |
| heart_type_disease_times | 1.009326 | 1.003567 | 1.015119 | 0.001476 | 2.169583 | 110.937662 | < 0.0001 |
| neurological_type_disease_times | 1.038940 | 1.027924 | 1.050074 | < 0.0001 | 1.307638 | 66.863672 | < 0.0001 |
| diabetes_times | 1.009344 | 1.000222 | 1.018550 | 0.044651 | 0.270415 | 13.827201 | 0.000201 |
| hyperlipidemia_times | 1.009784 | 0.988370 | 1.031661 | 0.373329 | 1.382517 | 70.692468 | < 0.0001 |
| dabigatran_etexilate_hours_diff_mean | 0.993424 | 0.983521 | 1.003426 | 0.196765 | 0.039207 | 2.004757 | 0.156809 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|-------------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154983 | 1.060812 | 1.257512 | 0.000899 | 0.059810 | 3.058272 | 0.080330 |
| age | 1.055561 | 1.052517 | 1.058614 | < 0.0001 | 12.142693 | 620.894614 | < 0.0001 |
| with_psychosis | 1.407024 | 1.264922 | 1.565090 | < 0.0001 | 0.105934 | 5.416733 | 0.019946 |
| hypertension_times | 0.950884 | 0.933898 | 0.968179 | < 0.0001 | 0.360188 | 18.417543 | < 0.0001 |
| heart_type_disease_times | 1.009312 | 1.003552 | 1.015105 | 0.001504 | 2.171798 | 111.050958 | < 0.0001 |
| neurological_type_disease_times | 1.038927 | 1.027910 | 1.050062 | < 0.0001 | 1.306761 | 66.818870 | < 0.0001 |
| diabetes_times | 1.009374 | 1.000258 | 1.018573 | 0.043830 | 0.270503 | 13.831662 | 0.000200 |
| hyperlipidemia_times | 1.009793 | 0.988380 | 1.031669 | 0.372842 | 1.381812 | 70.656470 | < 0.0001 |
| dabigatran_etexilate_hours_diff_max | 0.996250 | 0.989918 | 1.002623 | 0.248158 | 0.039884 | 2.039383 | 0.153275 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|-------------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.155192 | 1.061003 | 1.257742 | 0.000886 | 0.059710 | 3.053164 | 0.080583 |
| age | 1.055571 | 1.052526 | 1.058624 | < 0.0001 | 12.142758 | 620.893365 | < 0.0001 |
| with_psychosis | 1.406605 | 1.264538 | 1.564633 | < 0.0001 | 0.105409 | 5.389835 | 0.020256 |
| hypertension_times | 0.950834 | 0.933841 | 0.968137 | < 0.0001 | 0.359139 | 18.363804 | < 0.0001 |
| heart_type_disease_times | 1.009212 | 1.003451 | 1.015006 | 0.001691 | 2.156648 | 110.275498 | < 0.0001 |
| neurological_type_disease_times | 1.039008 | 1.027989 | 1.050146 | < 0.0001 | 1.308472 | 66.905869 | < 0.0001 |
| diabetes_times | 1.009396 | 1.000269 | 1.018606 | 0.043592 | 0.269062 | 13.757916 | 0.000208 |
| hyperlipidemia_times | 1.009757 | 0.988334 | 1.031644 | 0.374852 | 1.382898 | 70.711474 | < 0.0001 |
| dabigatran_etexilate_hours_diff_min | 0.992131 | 0.978383 | 1.006072 | 0.267168 | 0.024417 | 1.248499 | 0.263842 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.155394 | 1.061189 | 1.257961 | 0.000873 | 0.059539 | 3.044405 | 0.081019 |
| age | 1.055570 | 1.052526 | 1.058623 | < 0.0001 | 12.148415 | 621.188489 | < 0.0001 |
| with_psychosis | 1.406641 | 1.264573 | 1.564668 | < 0.0001 | 0.105703 | 5.404943 | 0.020082 |
| hypertension_times | 0.950858 | 0.933871 | 0.968154 | < 0.0001 | 0.359437 | 18.379220 | < 0.0001 |
| heart_type_disease_times | 1.009338 | 1.003579 | 1.015130 | 0.001454 | 2.170677 | 110.993854 | < 0.0001 |
| neurological_type_disease_times | 1.038937 | 1.027920 | 1.050072 | < 0.0001 | 1.307430 | 66.853216 | < 0.0001 |
| diabetes_times | 1.009323 | 1.000197 | 1.018532 | 0.045226 | 0.270516 | 13.832380 | 0.000200 |
| hyperlipidemia_times | 1.009785 | 0.988370 | 1.031663 | 0.373294 | 1.382642 | 70.699041 | < 0.0001 |
| dabigatran etexilate_hours_diff_median | 0.992255 | 0.981353 | 1.003279 | 0.167808 | 0.044279 | 2.264144 | 0.132402 |

Cilostazol

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.045734 | 0.959720 | 1.139457 | 0.307186 | 0.319835 | 16.531848 | < 0.0001 |
| age | 1.040404 | 1.036969 | 1.043851 | < 0.0001 | 1.375441 | 71.094685 | < 0.0001 |
| with_psychosis | 0.948187 | 0.851414 | 1.055960 | 0.332726 | 0.038766 | 2.003788 | 0.156910 |
| with_hypertension | 1.289354 | 1.129404 | 1.471956 | 0.000169 | 0.565513 | 29.230610 | < 0.0001 |
| with_heart_type_disease | 1.559730 | 1.405277 | 1.731158 | < 0.0001 | 4.005836 | 207.056238 | < 0.0001 |
| with_neurological_type_disease | 3.045443 | 2.785151 | 3.330062 | < 0.0001 | 17.723149 | 916.085609 | < 0.0001 |
| with_diabetes | 1.166311 | 1.065190 | 1.277032 | 0.000885 | 0.634243 | 32.783151 | < 0.0001 |
| with_hyperlipidemia | 1.486102 | 1.338187 | 1.650365 | < 0.0001 | 4.648244 | 240.261446 | < 0.0001 |
| cilostazol | 0.999110 | 0.589719 | 1.692706 | 0.997359 | 0.126648 | 6.546249 | 0.010512 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.154308 | 1.060192 | 1.256780 | 0.000943 | 0.059470 | 3.041272 | 0.081175 |
| age | 1.055545 | 1.052499 | 1.058599 | < 0.0001 | 12.116395 | 619.624024 | < 0.0001 |
| with_psychosis | 1.405339 | 1.263340 | 1.563299 | < 0.0001 | 0.101844 | 5.208228 | 0.022482 |
| hypertension_times | 0.951351 | 0.934338 | 0.968673 | < 0.0001 | 0.376681 | 19.263212 | < 0.0001 |
| heart_type_disease_times | 1.008989 | 1.003188 | 1.014823 | 0.002350 | 2.090512 | 106.907333 | < 0.0001 |
| neurological_type_disease_times | 1.039401 | 1.028348 | 1.050572 | < 0.0001 | 1.312978 | 67.144763 | < 0.0001 |
| diabetes_times | 1.008226 | 0.998865 | 1.017675 | 0.085198 | 0.319119 | 16.319533 | < 0.0001 |
| hyperlipidemia_times | 1.009935 | 0.988378 | 1.031962 | 0.369153 | 1.369230 | 70.021485 | < 0.0001 |
| cilostazol_count | 1.061548 | 0.991109 | 1.136994 | 0.088191 | 0.291726 | 14.918681 | 0.000112 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.153329 | 1.059280 | 1.255729 | 0.001013 | 0.061236 | 3.131209 | 0.076810 |
| age | 1.055533 | 1.052487 | 1.058587 | < 0.0001 | 12.089626 | 618.188045 | < 0.0001 |
| with_psychosis | 1.406038 | 1.264008 | 1.564027 | < 0.0001 | 0.102456 | 5.238958 | 0.022088 |
| hypertension_times | 0.950959 | 0.933959 | 0.968269 | < 0.0001 | 0.362904 | 18.556649 | < 0.0001 |
| heart_type_disease_times | 1.009025 | 1.003259 | 1.014825 | 0.002123 | 2.126386 | 108.730107 | < 0.0001 |
| neurological_type_disease_times | 1.039144 | 1.028110 | 1.050296 | < 0.0001 | 1.311898 | 67.082298 | < 0.0001 |
| diabetes_times | 1.009316 | 1.000166 | 1.018549 | 0.045957 | 0.276498 | 14.138378 | 0.000170 |
| hyperlipidemia_times | 1.009704 | 0.988246 | 1.031627 | 0.378255 | 1.370847 | 70.096589 | < 0.0001 |
| cilostazol_mean | 1.001843 | 0.995569 | 1.008157 | 0.565678 | 0.063579 | 3.251035 | 0.071381 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.153343 | 1.059294 | 1.255743 | 0.001012 | 0.061197 | 3.129219 | 0.076903 |
| age | 1.055533 | 1.052487 | 1.058587 | < 0.0001 | 12.090019 | 618.208473 | < 0.0001 |
| with_psychosis | 1.406069 | 1.264037 | 1.564060 | < 0.0001 | 0.102521 | 5.242268 | 0.022046 |
| hypertension_times | 0.950962 | 0.933962 | 0.968272 | < 0.0001 | 0.363051 | 18.564166 | < 0.0001 |
| heart_type_disease_times | 1.009028 | 1.003261 | 1.014828 | 0.002118 | 2.126663 | 108.744356 | < 0.0001 |
| neurological_type_disease_times | 1.039144 | 1.028110 | 1.050296 | < 0.0001 | 1.311902 | 67.082547 | < 0.0001 |
| diabetes_times | 1.009306 | 1.000155 | 1.018540 | 0.046216 | 0.277141 | 14.171262 | 0.000167 |
| hyperlipidemia_times | 1.009705 | 0.988246 | 1.031629 | 0.378204 | 1.370369 | 70.072154 | < 0.0001 |
| cilostazol_max | 1.001788 | 0.995665 | 1.007949 | 0.567861 | 0.064726 | 3.309711 | 0.068874 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.153296 | 1.059249 | 1.255694 | 0.001015 | 0.061256 | 3.132238 | 0.076761 |
| age | 1.055532 | 1.052487 | 1.058587 | < 0.0001 | 12.090351 | 618.224780 | < 0.0001 |
| with_psychosis | 1.406004 | 1.263979 | 1.563987 | < 0.0001 | 0.102476 | 5.239960 | 0.022076 |
| hypertension_times | 0.950947 | 0.933945 | 0.968259 | < 0.0001 | 0.362470 | 18.534469 | < 0.0001 |
| heart_type_disease_times | 1.009021 | 1.003254 | 1.014821 | 0.002135 | 2.126345 | 108.727980 | < 0.0001 |
| neurological_type_disease_times | 1.039148 | 1.028114 | 1.050300 | < 0.0001 | 1.311949 | 67.084839 | < 0.0001 |
| diabetes_times | 1.009333 | 1.000186 | 1.018565 | 0.045509 | 0.275406 | 14.082547 | 0.000175 |
| hyperlipidemia_times | 1.009692 | 0.988234 | 1.031616 | 0.378817 | 1.370981 | 70.103361 | < 0.0001 |
| cilostazol_min | 1.001975 | 0.995605 | 1.008386 | 0.544346 | 0.062348 | 3.188110 | 0.074179 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.153385 | 1.059330 | 1.255790 | 0.001009 | 0.061213 | 3.130065 | 0.076864 |
| age | 1.055535 | 1.052489 | 1.058589 | < 0.0001 | 12.091349 | 618.274101 | < 0.0001 |
| with_psychosis | 1.406129 | 1.264090 | 1.564128 | < 0.0001 | 0.102584 | 5.245511 | 0.022005 |
| hypertension_times | 0.950952 | 0.933951 | 0.968261 | < 0.0001 | 0.362663 | 18.544283 | < 0.0001 |
| heart_type_disease_times | 1.009027 | 1.003261 | 1.014826 | 0.002115 | 2.127321 | 108.777548 | < 0.0001 |
| neurological_type_disease_times | 1.039130 | 1.028097 | 1.050282 | < 0.0001 | 1.311633 | 67.068507 | < 0.0001 |
| diabetes_times | 1.009343 | 1.000195 | 1.018575 | 0.045300 | 0.275729 | 14.099024 | 0.000174 |
| hyperlipidemia_times | 1.009712 | 0.988258 | 1.031632 | 0.377759 | 1.371566 | 70.133084 | < 0.0001 |
| cilostazol_median | 1.001635 | 0.995311 | 1.007999 | 0.613201 | 0.056573 | 2.892776 | 0.088980 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.153201 | 1.059178 | 1.255571 | 0.001020 | 0.060556 | 3.096544 | 0.078462 |
| age | 1.055516 | 1.052471 | 1.058570 | < 0.0001 | 12.082065 | 617.820642 | < 0.0001 |
| with_psychosis | 1.405078 | 1.263131 | 1.562976 | < 0.0001 | 0.101055 | 5.167497 | 0.023015 |
| hypertension_times | 0.951113 | 0.934125 | 0.968410 | < 0.0001 | 0.366804 | 18.756641 | < 0.0001 |
| heart_type_disease_times | 1.009016 | 1.003242 | 1.014824 | 0.002176 | 2.122928 | 108.556650 | < 0.0001 |
| neurological_type_disease_times | 1.039212 | 1.028172 | 1.050370 | < 0.0001 | 1.307945 | 66.882215 | < 0.0001 |
| diabetes_times | 1.008935 | 0.999783 | 1.018171 | 0.055718 | 0.285209 | 14.584278 | 0.000134 |
| hyperlipidemia_times | 1.009810 | 0.988322 | 1.031766 | 0.373682 | 1.377208 | 70.424006 | < 0.0001 |
| cilostazol_hours_diff_mean | 1.002974 | 0.999000 | 1.006963 | 0.142607 | 0.129044 | 6.598687 | 0.010207 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.153642 | 1.059583 | 1.256052 | 0.000989 | 0.060447 | 3.090838 | 0.078737 |
| age | 1.055542 | 1.052497 | 1.058596 | < 0.0001 | 12.108807 | 619.160543 | < 0.0001 |
| with_psychosis | 1.406108 | 1.264053 | 1.564128 | < 0.0001 | 0.103263 | 5.280138 | 0.021572 |
| hypertension_times | 0.951022 | 0.934023 | 0.968330 | < 0.0001 | 0.365017 | 18.664459 | < 0.0001 |
| heart_type_disease_times | 1.009044 | 1.003278 | 1.014843 | 0.002075 | 2.131172 | 108.973391 | < 0.0001 |
| neurological_type_disease_times | 1.039100 | 1.028065 | 1.050253 | < 0.0001 | 1.305460 | 66.752162 | < 0.0001 |
| diabetes_times | 1.009239 | 1.000047 | 1.018515 | 0.048825 | 0.280429 | 14.339209 | 0.000153 |
| hyperlipidemia_times | 1.009785 | 0.988329 | 1.031706 | 0.374204 | 1.379733 | 70.549990 | < 0.0001 |
| cilostazol_hours_diff_max | 1.000624 | 0.998159 | 1.003094 | 0.620189 | 0.035299 | 1.804943 | 0.179119 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.153386 | 1.059354 | 1.255766 | 0.001006 | 0.060775 | 3.107887 | 0.077917 |
| age | 1.055511 | 1.052466 | 1.058565 | < 0.0001 | 12.065511 | 617.005922 | < 0.0001 |
| with_psychosis | 1.404607 | 1.262701 | 1.562461 | < 0.0001 | 0.100068 | 5.117258 | 0.023691 |
| hypertension_times | 0.951032 | 0.934036 | 0.968337 | < 0.0001 | 0.364578 | 18.643809 | < 0.0001 |
| heart_type_disease_times | 1.008992 | 1.003220 | 1.014796 | 0.002224 | 2.127768 | 108.809764 | < 0.0001 |
| neurological_type_disease_times | 1.039178 | 1.028146 | 1.050328 | < 0.0001 | 1.310524 | 67.017552 | < 0.0001 |
| diabetes_times | 1.009215 | 1.000067 | 1.018446 | 0.048326 | 0.277532 | 14.192432 | 0.000165 |
| hyperlipidemia_times | 1.009774 | 0.988310 | 1.031703 | 0.374930 | 1.377411 | 70.438039 | < 0.0001 |
| cilostazol_hours_diff_min | 1.004494 | 1.000895 | 1.008106 | 0.014341 | 0.237463 | 12.143384 | 0.000493 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.153207 | 1.059185 | 1.255576 | 0.001020 | 0.060551 | 3.096359 | 0.078470 |
| age | 1.055513 | 1.052468 | 1.058567 | < 0.0001 | 12.077556 | 617.599491 | < 0.0001 |
| with_psychosis | 1.405181 | 1.263241 | 1.563071 | < 0.0001 | 0.100493 | 5.138804 | 0.023399 |
| hypertension_times | 0.951059 | 0.934066 | 0.968362 | < 0.0001 | 0.366353 | 18.733899 | < 0.0001 |
| heart_type_disease_times | 1.008976 | 1.003199 | 1.014787 | 0.002286 | 2.117922 | 108.302347 | < 0.0001 |
| neurological_type_disease_times | 1.039240 | 1.028204 | 1.050394 | < 0.0001 | 1.310926 | 67.035670 | < 0.0001 |
| diabetes_times | 1.009013 | 0.999866 | 1.018244 | 0.053473 | 0.283430 | 14.493500 | 0.000141 |
| hyperlipidemia_times | 1.009813 | 0.988326 | 1.031766 | 0.373539 | 1.377319 | 70.430755 | < 0.0001 |
| cilostazol_hours_diff_median | 1.003465 | 0.999561 | 1.007384 | 0.081963 | 0.161029 | 8.234377 | 0.004111 |

Enoxaparin

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.020906 | 0.936817 | 1.112542 | 0.637090 | 0.341777 | 17.670935 | <0.0001 |
| age | 1.040497 | 1.037077 | 1.043929 | <0.0001 | 1.472147 | 76.114672 | <0.0001 |
| with_psychosis | 0.980272 | 0.880164 | 1.091766 | 0.716950 | 0.017954 | 0.928299 | 0.335307 |
| with_hypertension | 1.311671 | 1.148635 | 1.497848 | <0.0001 | 0.591442 | 30.579409 | <0.0001 |
| with_heart_type_disease | 1.581227 | 1.424299 | 1.755446 | <0.0001 | 4.006380 | 207.142574 | <0.0001 |
| with_neurological_type_disease | 3.100922 | 2.836019 | 3.390569 | <0.0001 | 17.825910 | 921.656247 | <0.0001 |
| with_diabetes | 1.157022 | 1.056777 | 1.266775 | 0.001609 | 0.630984 | 32.623889 | <0.0001 |
| with_hyperlipidemia | 1.497293 | 1.348131 | 1.662958 | <0.0001 | 4.716896 | 243.878534 | <0.0001 |
| enoxaparin | 0.504938 | 0.440062 | 0.579378 | <0.0001 | 0.712048 | 36.815161 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.139001 | 1.046055 | 1.240205 | 0.002730 | 0.067040 | 3.429466 | 0.064046 |
| age | 1.055607 | 1.052573 | 1.058649 | <0.0001 | 12.189462 | 623.553605 | <0.0001 |
| with_psychosis | 1.420525 | 1.276826 | 1.580397 | <0.0001 | 0.141088 | 7.217378 | 0.007221 |
| hypertension_times | 0.952476 | 0.935573 | 0.969684 | <0.0001 | 0.450031 | 23.021415 | <0.0001 |
| heart_type_disease_times | 1.010005 | 1.004325 | 1.015718 | 0.000541 | 2.153007 | 110.137352 | <0.0001 |
| neurological_type_disease_times | 1.048606 | 1.036305 | 1.061053 | <0.0001 | 1.468966 | 75.145153 | <0.0001 |
| diabetes_times | 1.008538 | 0.999350 | 1.017810 | 0.068658 | 0.313302 | 16.027029 | <0.0001 |
| hyperlipidemia_times | 1.012814 | 0.991548 | 1.034536 | 0.239598 | 1.464508 | 74.917113 | <0.0001 |
| enoxaparin_count | 0.831141 | 0.783757 | 0.881390 | <0.0001 | 0.943279 | 48.253590 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.148536 | 1.054858 | 1.250534 | 0.001422 | 0.061364 | 3.138580 | 0.076463 |
| age | 1.055549 | 1.052519 | 1.058587 | <0.0001 | 12.287291 | 628.456652 | <0.0001 |
| with_psychosis | 1.422034 | 1.278307 | 1.581920 | <0.0001 | 0.128017 | 6.547656 | 0.010504 |
| hypertension_times | 0.952875 | 0.935957 | 0.970100 | <0.0001 | 0.402298 | 20.576294 | <0.0001 |
| heart_type_disease_times | 1.009790 | 1.004069 | 1.015543 | 0.000777 | 2.202749 | 112.663732 | <0.0001 |
| neurological_type_disease_times | 1.042170 | 1.030919 | 1.053544 | <0.0001 | 1.357532 | 69.433534 | <0.0001 |
| diabetes_times | 1.008797 | 0.999559 | 1.018122 | 0.062051 | 0.289128 | 14.787992 | 0.000120 |
| hyperlipidemia_times | 1.011858 | 0.990422 | 1.033758 | 0.280575 | 1.441956 | 73.751564 | <0.0001 |
| enoxaparin_mean | 0.993300 | 0.991021 | 0.995584 | <0.0001 | 0.603748 | 30.879832 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.148484 | 1.054813 | 1.250473 | 0.001426 | 0.061652 | 3.153312 | 0.075776 |
| age | 1.055545 | 1.052515 | 1.058584 | < 0.0001 | 12.279623 | 628.063189 | < 0.0001 |
| with_psychosis | 1.420565 | 1.276973 | 1.580305 | < 0.0001 | 0.128483 | 6.571515 | 0.010364 |
| hypertension_times | 0.952665 | 0.935761 | 0.969876 | < 0.0001 | 0.403996 | 20.663098 | < 0.0001 |
| heart_type_disease_times | 1.009924 | 1.004209 | 1.015672 | 0.000649 | 2.207214 | 112.891896 | < 0.0001 |
| neurological_type_disease_times | 1.043211 | 1.031815 | 1.054733 | < 0.0001 | 1.368464 | 69.992504 | < 0.0001 |
| diabetes_times | 1.008813 | 0.999567 | 1.018145 | 0.061790 | 0.289386 | 14.801137 | 0.000120 |
| hyperlipidemia_times | 1.012047 | 0.990618 | 1.033940 | 0.272783 | 1.445010 | 73.907588 | < 0.0001 |
| enoxaparin_max | 0.993812 | 0.991692 | 0.995935 | < 0.0001 | 0.599423 | 30.658581 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.149167 | 1.055434 | 1.251224 | 0.001361 | 0.061057 | 3.122796 | 0.077207 |
| age | 1.055558 | 1.052528 | 1.058597 | < 0.0001 | 12.289026 | 628.532746 | < 0.0001 |
| with_psychosis | 1.423646 | 1.279776 | 1.583690 | < 0.0001 | 0.125996 | 6.444174 | 0.011133 |
| hypertension_times | 0.953207 | 0.936211 | 0.970511 | < 0.0001 | 0.397923 | 20.352096 | < 0.0001 |
| heart_type_disease_times | 1.009540 | 1.003804 | 1.015309 | 0.001090 | 2.193698 | 112.198575 | < 0.0001 |
| neurological_type_disease_times | 1.039865 | 1.028918 | 1.050928 | < 0.0001 | 1.341922 | 68.633744 | < 0.0001 |
| diabetes_times | 1.008743 | 0.999508 | 1.018063 | 0.063586 | 0.287866 | 14.723151 | 0.000125 |
| hyperlipidemia_times | 1.011504 | 0.990007 | 1.033469 | 0.296658 | 1.434906 | 73.389504 | < 0.0001 |
| enoxaparin_min | 0.993128 | 0.990707 | 0.995555 | < 0.0001 | 0.561403 | 28.713418 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.148462 | 1.054791 | 1.250452 | 0.001429 | 0.061289 | 3.134760 | 0.076642 |
| age | 1.055547 | 1.052517 | 1.058585 | < 0.0001 | 12.287352 | 628.463638 | < 0.0001 |
| with_psychosis | 1.421714 | 1.278018 | 1.581566 | < 0.0001 | 0.128364 | 6.565484 | 0.010399 |
| hypertension_times | 0.952765 | 0.935871 | 0.969964 | < 0.0001 | 0.402508 | 20.587141 | < 0.0001 |
| heart_type_disease_times | 1.009815 | 1.004097 | 1.015565 | 0.000748 | 2.203164 | 112.685682 | < 0.0001 |
| neurological_type_disease_times | 1.042562 | 1.031238 | 1.054011 | < 0.0001 | 1.358297 | 69.473105 | < 0.0001 |
| diabetes_times | 1.008850 | 0.999616 | 1.018170 | 0.060358 | 0.288728 | 14.767644 | 0.000122 |
| hyperlipidemia_times | 1.011807 | 0.990398 | 1.033679 | 0.282032 | 1.442181 | 73.763503 | < 0.0001 |
| enoxaparin_median | 0.993267 | 0.990992 | 0.995547 | < 0.0001 | 0.616535 | 31.534026 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.1132579 | 1.040152 | 1.233220 | 0.004153 | 0.069364 | 3.548308 | 0.059609 |
| age | 1.055782 | 1.052749 | 1.058824 | < 0.0001 | 12.329515 | 630.715203 | < 0.0001 |
| with_psychosis | 1.444612 | 1.298643 | 1.606989 | < 0.0001 | 0.147330 | 7.536666 | 0.006047 |
| hypertension_times | 0.953899 | 0.936821 | 0.971288 | < 0.0001 | 0.401055 | 20.515927 | < 0.0001 |
| heart_type_disease_times | 1.008422 | 1.002680 | 1.014196 | 0.003994 | 2.061316 | 105.446452 | < 0.0001 |
| neurological_type_disease_times | 1.041597 | 1.030482 | 1.052833 | < 0.0001 | 1.372170 | 70.193253 | < 0.0001 |
| diabetes_times | 1.008885 | 0.999617 | 1.018239 | 0.060289 | 0.277672 | 14.204303 | 0.000164 |
| hyperlipidemia_times | 1.012002 | 0.990461 | 1.034013 | 0.277107 | 1.437186 | 73.519109 | < 0.0001 |
| enoxaparin_hours_diff_mean | 0.991279 | 0.988983 | 0.993580 | < 0.0001 | 0.933831 | 47.770034 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.135155 | 1.042513 | 1.236028 | 0.003518 | 0.063698 | 3.257903 | 0.071083 |
| age | 1.055680 | 1.052647 | 1.058723 | < 0.0001 | 12.204024 | 624.187916 | < 0.0001 |
| with_psychosis | 1.444408 | 1.298471 | 1.606747 | < 0.0001 | 0.134690 | 6.888889 | 0.008675 |
| hypertension_times | 0.953888 | 0.936764 | 0.971324 | < 0.0001 | 0.399184 | 20.416714 | < 0.0001 |
| heart_type_disease_times | 1.008773 | 1.003046 | 1.014532 | 0.002637 | 2.109484 | 107.891803 | < 0.0001 |
| neurological_type_disease_times | 1.043211 | 1.031964 | 1.054580 | < 0.0001 | 1.358040 | 69.458407 | < 0.0001 |
| diabetes_times | 1.008762 | 0.999478 | 1.018132 | 0.064405 | 0.278461 | 14.242180 | 0.000161 |
| hyperlipidemia_times | 1.011949 | 0.990322 | 1.034048 | 0.281197 | 1.402246 | 71.719395 | < 0.0001 |
| enoxaparin_hours_diff_max | 0.993994 | 0.992313 | 0.995678 | < 0.0001 | 0.570321 | 29.169677 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.137865 | 1.045026 | 1.238952 | 0.002938 | 0.067786 | 3.466891 | 0.062612 |
| age | 1.055811 | 1.052774 | 1.058858 | < 0.0001 | 12.271479 | 627.616025 | < 0.0001 |
| with_psychosis | 1.429655 | 1.285193 | 1.590354 | < 0.0001 | 0.123813 | 6.332304 | 0.011857 |
| hypertension_times | 0.952937 | 0.935916 | 0.970268 | < 0.0001 | 0.376157 | 19.238272 | < 0.0001 |
| heart_type_disease_times | 1.008230 | 1.002465 | 1.014028 | 0.005087 | 2.078621 | 106.309571 | < 0.0001 |
| neurological_type_disease_times | 1.039073 | 1.028076 | 1.050188 | < 0.0001 | 1.325359 | 67.784519 | < 0.0001 |
| diabetes_times | 1.009238 | 1.000046 | 1.018514 | 0.048852 | 0.269517 | 13.784233 | 0.000205 |
| hyperlipidemia_times | 1.010966 | 0.989570 | 1.032825 | 0.317651 | 1.413061 | 72.269983 | < 0.0001 |
| enoxaparin_hours_diff_min | 0.991764 | 0.989099 | 0.994436 | < 0.0001 | 0.496732 | 25.405010 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.132238 | 1.039839 | 1.232847 | 0.004245 | 0.069983 | 3.579906 | 0.058485 |
| age | 1.055813 | 1.052779 | 1.058856 | < 0.0001 | 12.331039 | 630.782274 | < 0.0001 |
| with_psychosis | 1.443272 | 1.297448 | 1.605486 | < 0.0001 | 0.142882 | 7.309010 | 0.006862 |
| hypertension_times | 0.953873 | 0.936766 | 0.971293 | < 0.0001 | 0.397372 | 20.327202 | < 0.0001 |
| heart_type_disease_times | 1.008312 | 1.002561 | 1.014096 | 0.004563 | 2.058396 | 105.295252 | < 0.0001 |
| neurological_type_disease_times | 1.040600 | 1.029577 | 1.051741 | < 0.0001 | 1.363316 | 69.739114 | < 0.0001 |
| diabetes_times | 1.008925 | 0.999648 | 1.018288 | 0.059400 | 0.276395 | 14.138719 | 0.000170 |
| hyperlipidemia_times | 1.012009 | 0.990449 | 1.034037 | 0.277253 | 1.436040 | 73.459233 | < 0.0001 |
| enoxaparin_hours_diff_median | 0.991005 | 0.988632 | 0.993384 | < 0.0001 | 0.897450 | 45.908162 | < 0.0001 |

(資料來源：https://mimic-iv-drug-data-analysis-0--introduction-uwuting.streamlit.app/Cox_PH_Model)

附錄三

Cox 模型結果，全面呈現八種藥物(Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin) 對出血性中風患者的風險影響，關於各項藥物預測出血性中風的風險比詳細結果。

Aspirin

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|-------------|----------|
| gender | 1.574008 | 1.367066 | 1.812276 | < 0.0001 | 0.105832 | 14.712301 | 0.000125 |
| age | 1.038519 | 1.033206 | 1.043859 | < 0.0001 | 0.366055 | 50.887426 | < 0.0001 |
| with_psychosis | 0.736373 | 0.618480 | 0.876739 | 0.000587 | 0.097498 | 13.553804 | 0.000232 |
| with_hypertension | 1.416655 | 1.161782 | 1.727444 | 0.000578 | 0.179710 | 24.982567 | < 0.0001 |
| with_heart_type_disease | 1.362896 | 1.150144 | 1.615001 | 0.000350 | 0.334221 | 46.462050 | < 0.0001 |
| with_neurological_type_disease | 10.434123 | 8.981583 | 12.121575 | < 0.0001 | 12.205761 | 1696.794213 | < 0.0001 |
| with_diabetes | 0.989623 | 0.845180 | 1.158752 | 0.896901 | 0.002142 | 0.297810 | 0.585260 |
| with_hyperlipidemia | 0.987163 | 0.839764 | 1.160433 | 0.875566 | 0.072150 | 10.029942 | 0.001541 |
| aspirin | 0.454362 | 0.387757 | 0.532407 | < 0.0001 | 0.545201 | 75.791626 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.530790 | 1.330183 | 1.761650 | < 0.0001 | 0.109409 | 15.043768 | 0.000105 |
| age | 1.049780 | 1.044959 | 1.054624 | < 0.0001 | 1.865187 | 256.464166 | < 0.0001 |
| with_psychosis | 1.420296 | 1.190414 | 1.694570 | < 0.0001 | 0.000391 | 0.053728 | 0.816700 |
| hypertension_times | 0.9555824 | 0.932645 | 0.979578 | 0.000309 | 0.006533 | 0.898308 | 0.343238 |
| heart_type_disease_times | 1.006230 | 0.993227 | 1.019403 | 0.349360 | 0.229641 | 31.575786 | < 0.0001 |
| neurological_type_disease_times | 1.070575 | 1.057585 | 1.083724 | < 0.0001 | 3.734950 | 513.557408 | < 0.0001 |
| diabetes_times | 1.024134 | 1.009004 | 1.039492 | 0.001688 | 0.021493 | 2.955260 | 0.085601 |
| hyperlipidemia_times | 0.956845 | 0.920466 | 0.994661 | 0.025705 | 0.014502 | 1.993997 | 0.157926 |
| aspirin_count | 0.905542 | 0.868041 | 0.944664 | < 0.0001 | 0.533077 | 73.298406 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.508907 | 1.311226 | 1.736389 | < 0.0001 | 0.087983 | 12.089984 | 0.000507 |
| age | 1.050112 | 1.045252 | 1.054995 | < 0.0001 | 1.734845 | 238.388421 | < 0.0001 |
| with_psychosis | 1.386574 | 1.161746 | 1.654912 | 0.000294 | 0.000863 | 0.118584 | 0.730576 |
| hypertension_times | 0.945368 | 0.922680 | 0.968614 | < 0.0001 | 0.000702 | 0.096485 | 0.756090 |
| heart_type_disease_times | 0.997145 | 0.985397 | 1.009033 | 0.636318 | 0.030918 | 4.248514 | 0.039287 |
| neurological_type_disease_times | 1.080868 | 1.068847 | 1.093024 | < 0.0001 | 3.698285 | 508.188499 | < 0.0001 |
| diabetes_times | 1.019172 | 1.004973 | 1.033572 | 0.007980 | 0.001383 | 0.190074 | 0.662856 |
| hyperlipidemia_times | 0.953768 | 0.918842 | 0.990021 | 0.012888 | 0.000370 | 0.050869 | 0.821558 |
| aspirin_mean | 0.998985 | 0.998171 | 0.999800 | 0.014664 | 0.020340 | 2.795020 | 0.094560 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.521851 | 1.322454 | 1.751314 | < 0.0001 | 0.092612 | 12.726574 | 0.000361 |
| age | 1.050365 | 1.045524 | 1.055229 | < 0.0001 | 1.790741 | 246.080383 | < 0.0001 |
| with_psychosis | 1.384343 | 1.160036 | 1.652021 | 0.000311 | 0.000710 | 0.097602 | 0.754727 |
| hypertension_times | 0.946810 | 0.924063 | 0.970118 | < 0.0001 | 0.000829 | 0.113869 | 0.735782 |
| heart_type_disease_times | 0.999585 | 0.987713 | 1.011599 | 0.945655 | 0.041132 | 5.652252 | 0.017435 |
| neurological_type_disease_times | 1.078788 | 1.066698 | 1.091016 | < 0.0001 | 3.694187 | 507.648467 | < 0.0001 |
| diabetes_times | 1.018805 | 1.004371 | 1.033446 | 0.010494 | 0.001278 | 0.175641 | 0.675148 |
| hyperlipidemia_times | 0.955745 | 0.920630 | 0.992199 | 0.017787 | 0.000766 | 0.105300 | 0.745560 |
| aspirin_max | 0.998805 | 0.998153 | 0.999458 | 0.000336 | 0.056362 | 7.745212 | 0.005386 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.499554 | 1.303273 | 1.725396 | < 0.0001 | 0.086930 | 11.945209 | 0.000548 |
| age | 1.049835 | 1.044973 | 1.054720 | < 0.0001 | 1.729745 | 237.686429 | < 0.0001 |
| with_psychosis | 1.389228 | 1.163884 | 1.658201 | 0.000272 | 0.000919 | 0.126228 | 0.722376 |
| hypertension_times | 0.944653 | 0.921994 | 0.967868 | < 0.0001 | 0.000662 | 0.091006 | 0.762903 |
| heart_type_disease_times | 0.995926 | 0.984204 | 1.007787 | 0.499147 | 0.028079 | 3.858403 | 0.049500 |
| neurological_type_disease_times | 1.081968 | 1.069999 | 1.094070 | < 0.0001 | 3.699791 | 508.392803 | < 0.0001 |
| diabetes_times | 1.019468 | 1.005339 | 1.033796 | 0.006773 | 0.001500 | 0.206094 | 0.649847 |
| hyperlipidemia_times | 0.952710 | 0.917795 | 0.988953 | 0.010988 | 0.000277 | 0.038037 | 0.845370 |
| aspirin_min | 0.999191 | 0.998285 | 1.000097 | 0.080185 | 0.016136 | 2.217332 | 0.136472 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.500095 | 1.303692 | 1.726085 | <0.0001 | 0.085090 | 11.692208 | 0.000628 |
| age | 1.049827 | 1.044966 | 1.054711 | <0.0001 | 1.707598 | 234.640674 | <0.0001 |
| with_psychosis | 1.387738 | 1.162629 | 1.656434 | 0.000285 | 0.000933 | 0.128227 | 0.720278 |
| hypertension_times | 0.944782 | 0.922115 | 0.968007 | <0.0001 | 0.000665 | 0.091338 | 0.762483 |
| heart_type_disease_times | 0.996304 | 0.984570 | 1.008178 | 0.540122 | 0.027936 | 3.838643 | 0.050087 |
| neurological_type_disease_times | 1.081730 | 1.069735 | 1.093860 | <0.0001 | 3.699833 | 508.393307 | <0.0001 |
| diabetes_times | 1.019307 | 1.005162 | 1.033651 | 0.007317 | 0.001447 | 0.198879 | 0.655628 |
| hyperlipidemia_times | 0.952872 | 0.917968 | 0.989103 | 0.011231 | 0.000253 | 0.034828 | 0.851957 |
| aspirin_median | 0.999305 | 0.998525 | 1.000087 | 0.081536 | 0.007860 | 1.080063 | 0.298686 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.493632 | 1.298076 | 1.718648 | <0.0001 | 0.087440 | 12.015508 | 0.000528 |
| age | 1.049636 | 1.044760 | 1.054535 | <0.0001 | 1.762612 | 242.208128 | <0.0001 |
| with_psychosis | 1.405710 | 1.176723 | 1.679257 | 0.000174 | 0.002085 | 0.286523 | 0.592458 |
| hypertension_times | 0.944573 | 0.921921 | 0.967781 | <0.0001 | 0.000495 | 0.068065 | 0.794176 |
| heart_type_disease_times | 0.996191 | 0.984357 | 1.008166 | 0.531314 | 0.033964 | 4.667079 | 0.030748 |
| neurological_type_disease_times | 1.081972 | 1.069937 | 1.094141 | <0.0001 | 3.708748 | 509.635215 | <0.0001 |
| diabetes_times | 1.019968 | 1.005955 | 1.034177 | 0.005093 | 0.002406 | 0.330647 | 0.565280 |
| hyperlipidemia_times | 0.951646 | 0.916745 | 0.987875 | 0.009326 | 0.000249 | 0.034211 | 0.853259 |
| aspirin_hours_diff_mean | 0.999221 | 0.997818 | 1.000627 | 0.277513 | 0.034236 | 4.704478 | 0.030086 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.499710 | 1.303323 | 1.725689 | <0.0001 | 0.090646 | 12.456958 | 0.000417 |
| age | 1.049646 | 1.044803 | 1.054511 | <0.0001 | 1.811799 | 248.983759 | <0.0001 |
| with_psychosis | 1.416990 | 1.186111 | 1.692811 | 0.000123 | 0.002984 | 0.410089 | 0.521926 |
| hypertension_times | 0.945656 | 0.922955 | 0.968916 | <0.0001 | 0.000578 | 0.079452 | 0.778042 |
| heart_type_disease_times | 0.997659 | 0.985602 | 1.009863 | 0.705596 | 0.050209 | 6.899894 | 0.008621 |
| neurological_type_disease_times | 1.080639 | 1.068459 | 1.092958 | <0.0001 | 3.719977 | 511.212252 | <0.0001 |
| diabetes_times | 1.020683 | 1.006684 | 1.034877 | 0.003668 | 0.004125 | 0.566890 | 0.451499 |
| hyperlipidemia_times | 0.951657 | 0.916675 | 0.987973 | 0.009508 | 0.000447 | 0.061440 | 0.804235 |
| aspirin_hours_diff_max | 0.999289 | 0.998455 | 1.000123 | 0.094765 | 0.087310 | 11.998443 | 0.000533 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.484992 | 1.290996 | 1.708139 | < 0.0001 | 0.082672 | 11.359895 | 0.000751 |
| age | 1.049288 | 1.044415 | 1.054185 | < 0.0001 | 1.705231 | 234.314199 | < 0.0001 |
| with_psychosis | 1.392674 | 1.166471 | 1.662741 | 0.000250 | 0.001198 | 0.164627 | 0.684932 |
| hypertension_times | 0.943961 | 0.921334 | 0.967145 | < 0.0001 | 0.000565 | 0.077579 | 0.780606 |
| heart_type_disease_times | 0.995259 | 0.983528 | 1.007129 | 0.432061 | 0.025454 | 3.497596 | 0.061461 |
| neurological_type_disease_times | 1.082927 | 1.070988 | 1.094999 | < 0.0001 | 3.702359 | 508.737750 | < 0.0001 |
| diabetes_times | 1.019563 | 1.005474 | 1.033849 | 0.006353 | 0.001675 | 0.230097 | 0.631453 |
| hyperlipidemia_times | 0.951579 | 0.916663 | 0.987825 | 0.009263 | 0.000135 | 0.018600 | 0.891520 |
| aspirin_hours_diff_min | 0.999839 | 0.998179 | 1.001503 | 0.849718 | 0.003731 | 0.512646 | 0.473997 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.490560 | 1.295554 | 1.714919 | < 0.0001 | 0.085872 | 11.799890 | 0.000593 |
| age | 1.049554 | 1.044674 | 1.054458 | < 0.0001 | 1.742505 | 239.441556 | < 0.0001 |
| with_psychosis | 1.401237 | 1.173141 | 1.673681 | 0.000198 | 0.001777 | 0.244201 | 0.621189 |
| hypertension_times | 0.944331 | 0.921689 | 0.967530 | < 0.0001 | 0.000520 | 0.071459 | 0.789225 |
| heart_type_disease_times | 0.995809 | 0.984026 | 1.007734 | 0.489282 | 0.030652 | 4.211904 | 0.040144 |
| neurological_type_disease_times | 1.082331 | 1.070330 | 1.094467 | < 0.0001 | 3.705562 | 509.189753 | < 0.0001 |
| diabetes_times | 1.019832 | 1.005791 | 1.034069 | 0.005499 | 0.002144 | 0.294666 | 0.587247 |
| hyperlipidemia_times | 0.951587 | 0.916691 | 0.987812 | 0.009233 | 0.000204 | 0.027984 | 0.867148 |
| aspirin_hours_diff_median | 0.999373 | 0.997930 | 1.000818 | 0.394911 | 0.022318 | 3.066763 | 0.079911 |

Warfarin

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|-------------|----------|
| gender | 1.511256 | 1.312487 | 1.740128 | < 0.0001 | 0.073862 | 10.261411 | 0.001359 |
| age | 1.036860 | 1.031547 | 1.042201 | < 0.0001 | 0.289973 | 40.284871 | < 0.0001 |
| with_psychosis | 0.749191 | 0.629260 | 0.891979 | 0.001177 | 0.094423 | 13.117854 | 0.000293 |
| with_hypertension | 1.319276 | 1.080897 | 1.610225 | 0.006430 | 0.131882 | 18.321909 | < 0.0001 |
| with_heart_type_disease | 1.127271 | 0.951733 | 1.335186 | 0.165398 | 0.094981 | 13.195385 | 0.000281 |
| with_neurological_type_disease | 10.194346 | 8.776107 | 11.841776 | < 0.0001 | 12.035005 | 1671.978600 | < 0.0001 |
| with_diabetes | 0.934446 | 0.798388 | 1.093692 | 0.398402 | < 0.0001 | 0.011950 | 0.912951 |
| with_hyperlipidemia | 0.863108 | 0.735345 | 1.013069 | 0.071685 | 0.019947 | 2.771147 | 0.095980 |
| warfarin | 0.925361 | 0.768253 | 1.114598 | 0.413862 | 0.037833 | 5.255956 | 0.021874 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.481834 | 1.288309 | 1.704428 | < 0.0001 | 0.081366 | 11.180509 | 0.000827 |
| age | 1.049182 | 1.044359 | 1.054029 | < 0.0001 | 1.730555 | 237.794736 | < 0.0001 |
| with_psychosis | 1.389117 | 1.163487 | 1.658502 | 0.000279 | 0.001111 | 0.152719 | 0.695951 |
| hypertension_times | 0.942630 | 0.919743 | 0.966088 | < 0.0001 | 0.000677 | 0.092987 | 0.760415 |
| heart_type_disease_times | 0.996946 | 0.984097 | 1.009962 | 0.643970 | 0.030827 | 4.235875 | 0.039581 |
| neurological_type_disease_times | 1.084437 | 1.071597 | 1.097431 | < 0.0001 | 3.700754 | 508.519025 | < 0.0001 |
| diabetes_times | 1.019585 | 1.005639 | 1.033724 | 0.005775 | 0.001278 | 0.175675 | 0.675118 |
| hyperlipidemia_times | 0.953678 | 0.918295 | 0.990424 | 0.013940 | 0.000142 | 0.019502 | 0.888937 |
| warfarin_count | 0.995369 | 0.980421 | 1.010545 | 0.547652 | 0.006472 | 0.889341 | 0.345658 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.470995 | 1.278589 | 1.692355 | < 0.0001 | 0.072347 | 9.942493 | 0.001616 |
| age | 1.049002 | 1.044164 | 1.053862 | < 0.0001 | 1.634326 | 224.602864 | < 0.0001 |
| with_psychosis | 1.401258 | 1.173767 | 1.672841 | 0.000190 | 0.001485 | 0.204122 | 0.651415 |
| hypertension_times | 0.944281 | 0.921721 | 0.967393 | < 0.0001 | 0.000633 | 0.086997 | 0.768031 |
| heart_type_disease_times | 0.991482 | 0.979174 | 1.003944 | 0.179502 | 0.007872 | 1.081778 | 0.298302 |
| neurological_type_disease_times | 1.081945 | 1.069938 | 1.094087 | < 0.0001 | 3.672621 | 504.722562 | < 0.0001 |
| diabetes_times | 1.020037 | 1.005816 | 1.034460 | 0.005614 | 0.002197 | 0.301955 | 0.582661 |
| hyperlipidemia_times | 0.951281 | 0.916194 | 0.987712 | 0.009193 | 0.000186 | 0.025591 | 0.872905 |
| warfarin_mean | 1.052567 | 1.009916 | 1.097019 | 0.015202 | 0.115846 | 15.920484 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.477407 | 1.284307 | 1.699540 | <0.0001 | 0.074845 | 10.285222 | 0.001341 |
| age | 1.049144 | 1.044312 | 1.053999 | <0.0001 | 1.666174 | 228.966848 | <0.0001 |
| with_psychosis | 1.397628 | 1.170764 | 1.668453 | 0.000212 | 0.001234 | 0.169638 | 0.680434 |
| hypertension_times | 0.943935 | 0.921463 | 0.966954 | <0.0001 | 0.000560 | 0.076890 | 0.781557 |
| heart_type_disease_times | 0.992207 | 0.979751 | 1.004821 | 0.224807 | 0.008425 | 1.157740 | 0.281937 |
| neurological_type_disease_times | 1.081682 | 1.069599 | 1.093902 | <0.0001 | 3.664414 | 503.566478 | <0.0001 |
| diabetes_times | 1.019988 | 1.005764 | 1.034414 | 0.005743 | 0.002145 | 0.294826 | 0.587145 |
| hyperlipidemia_times | 0.951345 | 0.916326 | 0.987702 | 0.009144 | 0.000199 | 0.027324 | 0.868709 |
| warfarin_max | 1.025977 | 0.994162 | 1.058811 | 0.110566 | 0.071270 | 9.794016 | 0.001751 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.465369 | 1.273642 | 1.685957 | <0.0001 | 0.072221 | 9.925419 | 0.001631 |
| age | 1.048811 | 1.043968 | 1.053675 | <0.0001 | 1.619608 | 222.584886 | <0.0001 |
| with_psychosis | 1.404926 | 1.176646 | 1.677494 | 0.000171 | 0.001796 | 0.246884 | 0.619279 |
| hypertension_times | 0.943368 | 0.920900 | 0.966384 | <0.0001 | 0.000730 | 0.100286 | 0.751488 |
| heart_type_disease_times | 0.992453 | 0.980455 | 1.004598 | 0.222192 | 0.011805 | 1.622364 | 0.202765 |
| neurological_type_disease_times | 1.083494 | 1.071500 | 1.095622 | <0.0001 | 3.688956 | 506.978242 | <0.0001 |
| diabetes_times | 1.020118 | 1.006087 | 1.034345 | 0.004822 | 0.002020 | 0.277648 | 0.598248 |
| hyperlipidemia_times | 0.953207 | 0.918262 | 0.989482 | 0.011908 | 0.000180 | 0.024732 | 0.875036 |
| warfarin_min | 1.085836 | 1.030293 | 1.144373 | 0.002112 | 0.132737 | 18.242275 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.473002 | 1.280392 | 1.694586 | <0.0001 | 0.072446 | 9.956092 | 0.001604 |
| age | 1.049017 | 1.044180 | 1.053877 | <0.0001 | 1.636615 | 224.916744 | <0.0001 |
| with_psychosis | 1.401996 | 1.174376 | 1.673734 | 0.000185 | 0.001480 | 0.203403 | 0.651989 |
| hypertension_times | 0.944996 | 0.922304 | 0.968247 | <0.0001 | 0.000640 | 0.087992 | 0.766746 |
| heart_type_disease_times | 0.991683 | 0.979345 | 1.004177 | 0.191067 | 0.008294 | 1.139759 | 0.285706 |
| neurological_type_disease_times | 1.081554 | 1.069526 | 1.093718 | <0.0001 | 3.672855 | 504.753138 | <0.0001 |
| diabetes_times | 1.019865 | 1.005589 | 1.034344 | 0.006240 | 0.002178 | 0.299278 | 0.584337 |
| hyperlipidemia_times | 0.950402 | 0.915223 | 0.986932 | 0.008205 | 0.000173 | 0.023737 | 0.877557 |
| warfarin_median | 1.047588 | 1.005531 | 1.091404 | 0.026161 | 0.113387 | 15.582493 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.479129 | 1.285988 | 1.701278 | < 0.0001 | 0.078518 | 10.789945 | 0.001021 |
| age | 1.048925 | 1.044092 | 1.053779 | < 0.0001 | 1.640804 | 225.479644 | < 0.0001 |
| with_psychosis | 1.393661 | 1.167441 | 1.663718 | 0.000240 | 0.001221 | 0.167811 | 0.682066 |
| hypertension_times | 0.943644 | 0.921159 | 0.966678 | < 0.0001 | 0.000659 | 0.090578 | 0.763444 |
| heart_type_disease_times | 0.992645 | 0.980669 | 1.004768 | 0.233271 | 0.010457 | 1.437038 | 0.230622 |
| neurological_type_disease_times | 1.082875 | 1.070894 | 1.094990 | < 0.0001 | 3.676208 | 505.185340 | < 0.0001 |
| diabetes_times | 1.020037 | 1.005971 | 1.034300 | 0.005105 | 0.002059 | 0.282901 | 0.594807 |
| hyperlipidemia_times | 0.953207 | 0.918268 | 0.989475 | 0.011892 | 0.000304 | 0.041789 | 0.838022 |
| warfarin_hours_diff_mean | 1.004771 | 1.000905 | 1.008651 | 0.015530 | 0.068293 | 9.384861 | 0.002188 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.483706 | 1.290025 | 1.706466 | < 0.0001 | 0.080367 | 11.043536 | 0.000890 |
| age | 1.049142 | 1.044315 | 1.053991 | < 0.0001 | 1.694968 | 232.912483 | < 0.0001 |
| with_psychosis | 1.391204 | 1.165434 | 1.660710 | 0.000258 | 0.001005 | 0.138054 | 0.710224 |
| hypertension_times | 0.943576 | 0.921072 | 0.966630 | < 0.0001 | 0.000520 | 0.071427 | 0.789271 |
| heart_type_disease_times | 0.992868 | 0.980665 | 1.005224 | 0.256675 | 0.010852 | 1.491276 | 0.222021 |
| neurological_type_disease_times | 1.082317 | 1.070317 | 1.094451 | < 0.0001 | 3.665706 | 503.719538 | < 0.0001 |
| diabetes_times | 1.019873 | 1.005726 | 1.034220 | 0.005761 | 0.001931 | 0.265322 | 0.606488 |
| hyperlipidemia_times | 0.952277 | 0.917361 | 0.988521 | 0.010296 | 0.000277 | 0.038001 | 0.845441 |
| warfarin_hours_diff_max | 1.001514 | 0.999499 | 1.003532 | 0.140879 | 0.032541 | 4.471559 | 0.034466 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.480087 | 1.286854 | 1.702336 | < 0.0001 | 0.079120 | 10.872551 | 0.000976 |
| age | 1.048964 | 1.044135 | 1.053815 | < 0.0001 | 1.662822 | 228.502075 | < 0.0001 |
| with_psychosis | 1.397169 | 1.170321 | 1.667999 | 0.000216 | 0.001367 | 0.187800 | 0.664755 |
| hypertension_times | 0.943997 | 0.921385 | 0.967163 | < 0.0001 | 0.000710 | 0.097586 | 0.754747 |
| heart_type_disease_times | 0.994379 | 0.982605 | 1.006293 | 0.353605 | 0.019393 | 2.664897 | 0.102587 |
| neurological_type_disease_times | 1.083100 | 1.071149 | 1.095184 | < 0.0001 | 3.691658 | 507.301102 | < 0.0001 |
| diabetes_times | 1.019704 | 1.005646 | 1.033959 | 0.005870 | 0.001762 | 0.242089 | 0.622702 |
| hyperlipidemia_times | 0.952595 | 0.917682 | 0.988836 | 0.010794 | 0.000213 | 0.029260 | 0.864181 |
| warfarin_hours_diff_min | 1.006113 | 1.001118 | 1.011133 | 0.016392 | 0.056800 | 7.805324 | 0.005210 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.478100 | 1.285099 | 1.700086 | <0.0001 | 0.078106 | 10.733464 | 0.001052 |
| age | 1.048848 | 1.044011 | 1.053708 | <0.0001 | 1.630351 | 224.045663 | <0.0001 |
| with_psychosis | 1.394881 | 1.168433 | 1.665217 | 0.000231 | 0.001279 | 0.175797 | 0.675011 |
| hypertension_times | 0.943987 | 0.921440 | 0.967086 | <0.0001 | 0.000724 | 0.099560 | 0.752359 |
| heart_type_disease_times | 0.992523 | 0.980535 | 1.004658 | 0.226088 | 0.010505 | 1.443653 | 0.229552 |
| neurological_type_disease_times | 1.082965 | 1.070990 | 1.095074 | <0.0001 | 3.680130 | 505.729798 | <0.0001 |
| diabetes_times | 1.020024 | 1.005969 | 1.034276 | 0.005100 | 0.002068 | 0.284198 | 0.593964 |
| hyperlipidemia_times | 0.953096 | 0.918134 | 0.989388 | 0.011753 | 0.000290 | 0.039785 | 0.841901 |
| warfarin_hours_diff_median | 1.005697 | 1.001228 | 1.010187 | 0.012423 | 0.076912 | 10.569350 | 0.001150 |

Clopidogrel

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|-------------|----------|
| gender | 1.534510 | 1.332649 | 1.766947 | < 0.0001 | 0.078865 | 10.956255 | 0.000933 |
| age | 1.036889 | 1.031582 | 1.042224 | < 0.0001 | 0.300166 | 41.700415 | < 0.0001 |
| with_psychosis | 0.742843 | 0.623940 | 0.884405 | 0.000837 | 0.097550 | 13.552124 | 0.000232 |
| with_hypertension | 1.326215 | 1.087377 | 1.617512 | 0.005323 | 0.137577 | 19.112832 | < 0.0001 |
| with_heart_type_disease | 1.168655 | 0.989306 | 1.380518 | 0.066730 | 0.149287 | 20.739608 | < 0.0001 |
| with_neurological_type_disease | 10.183520 | 8.767959 | 11.827620 | < 0.0001 | 12.082124 | 1678.502277 | < 0.0001 |
| with_diabetes | 0.954390 | 0.815340 | 1.117154 | 0.561207 | < 0.0001 | 0.000495 | 0.982254 |
| with_hyperlipidemia | 0.892893 | 0.760588 | 1.048214 | 0.166204 | 0.025993 | 3.611092 | 0.057398 |
| clopidogrel | 0.656979 | 0.524898 | 0.822295 | 0.000244 | 0.027363 | 3.801378 | 0.051213 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.483541 | 1.289800 | 1.706383 | < 0.0001 | 0.086567 | 11.897805 | 0.000562 |
| age | 1.049396 | 1.044582 | 1.054233 | < 0.0001 | 1.740927 | 239.272427 | < 0.0001 |
| with_psychosis | 1.341684 | 1.122313 | 1.603934 | 0.001252 | 0.000568 | 0.078065 | 0.779938 |
| hypertension_times | 0.932022 | 0.910118 | 0.954454 | < 0.0001 | 0.000231 | 0.031747 | 0.858584 |
| heart_type_disease_times | 1.005783 | 0.994365 | 1.017333 | 0.322222 | 0.080303 | 11.036849 | 0.000893 |
| neurological_type_disease_times | 1.092680 | 1.079740 | 1.105774 | < 0.0001 | 3.711067 | 510.047760 | < 0.0001 |
| diabetes_times | 1.022759 | 1.010667 | 1.034995 | 0.000208 | 0.004058 | 0.557722 | 0.455181 |
| hyperlipidemia_times | 0.974255 | 0.940904 | 1.008789 | 0.142217 | 0.003179 | 0.436974 | 0.508588 |
| clopidogrel_count | 0.855322 | 0.791356 | 0.924459 | < 0.0001 | 0.180843 | 24.855066 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.489142 | 1.294458 | 1.713107 | < 0.0001 | 0.080514 | 11.063340 | 0.000881 |
| age | 1.049336 | 1.044506 | 1.054188 | < 0.0001 | 1.712105 | 235.257943 | < 0.0001 |
| with_psychosis | 1.389202 | 1.163704 | 1.658396 | 0.000275 | 0.001071 | 0.147205 | 0.701222 |
| hypertension_times | 0.943770 | 0.921139 | 0.966958 | < 0.0001 | 0.000668 | 0.091748 | 0.761967 |
| heart_type_disease_times | 0.996207 | 0.984287 | 1.008271 | 0.536032 | 0.022484 | 3.089501 | 0.078802 |
| neurological_type_disease_times | 1.082688 | 1.070734 | 1.094775 | < 0.0001 | 3.701672 | 508.641480 | < 0.0001 |
| diabetes_times | 1.019519 | 1.005462 | 1.033773 | 0.006354 | 0.001546 | 0.212395 | 0.644897 |
| hyperlipidemia_times | 0.952375 | 0.917481 | 0.988597 | 0.010403 | < 0.0001 | 0.013482 | 0.907563 |
| clopidogrel_mean | 0.999263 | 0.997375 | 1.001155 | 0.445063 | 0.000842 | 0.115730 | 0.733713 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.489481 | 1.294880 | 1.713328 | < 0.0001 | 0.081817 | 11.242346 | 0.000800 |
| age | 1.049338 | 1.044512 | 1.054186 | < 0.0001 | 1.731098 | 237.867699 | < 0.0001 |
| with_psychosis | 1.389095 | 1.163649 | 1.658219 | 0.000275 | 0.001021 | 0.140261 | 0.708023 |
| hypertension_times | 0.943845 | 0.921206 | 0.967041 | < 0.0001 | 0.000578 | 0.079420 | 0.778085 |
| heart_type_disease_times | 0.996466 | 0.984590 | 1.008486 | 0.562835 | 0.025545 | 3.510119 | 0.060998 |
| neurological_type_disease_times | 1.082482 | 1.070516 | 1.094582 | < 0.0001 | 3.697985 | 508.134812 | < 0.0001 |
| diabetes_times | 1.019498 | 1.005442 | 1.033751 | 0.006407 | 0.001567 | 0.215358 | 0.642601 |
| hyperlipidemia_times | 0.952367 | 0.917509 | 0.988549 | 0.010308 | 0.000160 | 0.022026 | 0.882020 |
| clopidogrel_max | 0.999374 | 0.998174 | 1.000576 | 0.307276 | 0.000659 | 0.090485 | 0.763562 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.491650 | 1.296567 | 1.716087 | < 0.0001 | 0.080929 | 11.120366 | 0.000854 |
| age | 1.049386 | 1.044557 | 1.054238 | < 0.0001 | 1.714958 | 235.649718 | < 0.0001 |
| with_psychosis | 1.387903 | 1.162602 | 1.656866 | 0.000287 | 0.001053 | 0.144655 | 0.703697 |
| hypertension_times | 0.943625 | 0.921006 | 0.966798 | < 0.0001 | 0.000635 | 0.087252 | 0.767701 |
| heart_type_disease_times | 0.996589 | 0.984675 | 1.008648 | 0.577722 | 0.023566 | 3.238153 | 0.071944 |
| neurological_type_disease_times | 1.082677 | 1.070732 | 1.094755 | < 0.0001 | 3.700176 | 508.435450 | < 0.0001 |
| diabetes_times | 1.019572 | 1.005559 | 1.033780 | 0.006049 | 0.001549 | 0.212812 | 0.644573 |
| hyperlipidemia_times | 0.953047 | 0.918160 | 0.989259 | 0.011488 | 0.000117 | 0.016044 | 0.899207 |
| clopidogrel_min | 0.998613 | 0.995969 | 1.001265 | 0.305017 | 0.000104 | 0.014315 | 0.904764 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.486786 | 1.292407 | 1.710401 | < 0.0001 | 0.079631 | 10.941998 | 0.000940 |
| age | 1.049281 | 1.044450 | 1.054134 | < 0.0001 | 1.704124 | 234.162139 | < 0.0001 |
| with_psychosis | 1.390292 | 1.164597 | 1.659725 | 0.000266 | 0.001104 | 0.151647 | 0.696967 |
| hypertension_times | 0.943853 | 0.921223 | 0.967038 | < 0.0001 | 0.000718 | 0.098722 | 0.753370 |
| heart_type_disease_times | 0.995729 | 0.983813 | 1.007788 | 0.485871 | 0.021128 | 2.903160 | 0.088409 |
| neurological_type_disease_times | 1.082844 | 1.070896 | 1.094925 | < 0.0001 | 3.704043 | 508.969238 | < 0.0001 |
| diabetes_times | 1.019533 | 1.005459 | 1.033804 | 0.006380 | 0.001516 | 0.208377 | 0.648044 |
| hyperlipidemia_times | 0.952011 | 0.917080 | 0.988272 | 0.009924 | < 0.0001 | 0.009585 | 0.922011 |
| clopidogrel_median | 0.999587 | 0.997627 | 1.001551 | 0.679928 | 0.003837 | 0.527251 | 0.467766 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.483304 | 1.289561 | 1.706155 | < 0.0001 | 0.080752 | 11.095990 | 0.000865 |
| age | 1.049196 | 1.044366 | 1.054049 | < 0.0001 | 1.713584 | 235.461390 | < 0.0001 |
| with_psychosis | 1.391623 | 1.165765 | 1.661239 | 0.000255 | 0.001017 | 0.139725 | 0.708555 |
| hypertension_times | 0.944056 | 0.921398 | 0.967273 | < 0.0001 | 0.000697 | 0.095833 | 0.756889 |
| heart_type_disease_times | 0.994994 | 0.982979 | 1.007157 | 0.418207 | 0.021963 | 3.017864 | 0.082355 |
| neurological_type_disease_times | 1.082959 | 1.071022 | 1.095029 | < 0.0001 | 3.700971 | 508.545553 | < 0.0001 |
| diabetes_times | 1.019456 | 1.005305 | 1.033805 | 0.006894 | 0.001384 | 0.190183 | 0.662765 |
| hyperlipidemia_times | 0.951471 | 0.916498 | 0.987779 | 0.009228 | 0.000120 | 0.016480 | 0.897852 |
| clopidogrel_hours_diff_mean | 1.000256 | 0.997731 | 1.002788 | 0.842664 | 0.001441 | 0.198072 | 0.656282 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.487897 | 1.293675 | 1.711279 | < 0.0001 | 0.082865 | 11.386647 | 0.000740 |
| age | 1.049324 | 1.044501 | 1.054170 | < 0.0001 | 1.749700 | 240.428822 | < 0.0001 |
| with_psychosis | 1.389268 | 1.163698 | 1.658564 | 0.000276 | 0.001172 | 0.161023 | 0.688217 |
| hypertension_times | 0.942462 | 0.919934 | 0.965541 | < 0.0001 | 0.000384 | 0.052698 | 0.818434 |
| heart_type_disease_times | 0.997824 | 0.985730 | 1.010066 | 0.726199 | 0.033620 | 4.619813 | 0.031607 |
| neurological_type_disease_times | 1.083720 | 1.071705 | 1.095871 | < 0.0001 | 3.701414 | 508.616621 | < 0.0001 |
| diabetes_times | 1.020503 | 1.006776 | 1.034416 | 0.003310 | 0.002680 | 0.368291 | 0.543938 |
| hyperlipidemia_times | 0.954100 | 0.919315 | 0.990202 | 0.013155 | 0.000185 | 0.025453 | 0.873245 |
| clopidogrel_hours_diff_max | 0.998713 | 0.996874 | 1.000556 | 0.170997 | 0.017375 | 2.387489 | 0.122313 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.477357 | 1.284424 | 1.699269 | < 0.0001 | 0.078070 | 10.728004 | 0.001056 |
| age | 1.048953 | 1.044118 | 1.053811 | < 0.0001 | 1.670532 | 229.557513 | < 0.0001 |
| with_psychosis | 1.390708 | 1.164921 | 1.660259 | 0.000263 | 0.001039 | 0.142739 | 0.705574 |
| hypertension_times | 0.944121 | 0.921507 | 0.967289 | < 0.0001 | 0.000992 | 0.136382 | 0.711906 |
| heart_type_disease_times | 0.994277 | 0.982456 | 1.006240 | 0.346909 | 0.018902 | 2.597480 | 0.107037 |
| neurological_type_disease_times | 1.083329 | 1.071367 | 1.095425 | < 0.0001 | 3.702429 | 508.772109 | < 0.0001 |
| diabetes_times | 1.019441 | 1.005298 | 1.033783 | 0.006908 | 0.001230 | 0.168978 | 0.681023 |
| hyperlipidemia_times | 0.952119 | 0.917109 | 0.988466 | 0.010261 | 0.000108 | 0.014872 | 0.902937 |
| clopidogrel_hours_diff_min | 1.002616 | 1.000092 | 1.005147 | 0.042174 | 0.042495 | 5.839512 | 0.015672 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.481184 | 1.287704 | 1.703734 | < 0.0001 | 0.079915 | 10.981163 | 0.000921 |
| age | 1.049129 | 1.044298 | 1.053983 | < 0.0001 | 1.700230 | 233.628372 | < 0.0001 |
| with_psychosis | 1.391436 | 1.165594 | 1.661035 | 0.000256 | 0.000994 | 0.136572 | 0.711714 |
| hypertension_times | 0.944215 | 0.921544 | 0.967444 | < 0.0001 | 0.000809 | 0.111158 | 0.738830 |
| heart_type_disease_times | 0.994466 | 0.982502 | 1.006575 | 0.368817 | 0.019907 | 2.735398 | 0.098150 |
| neurological_type_disease_times | 1.082988 | 1.071045 | 1.095065 | < 0.0001 | 3.700610 | 508.500272 | < 0.0001 |
| diabetes_times | 1.019316 | 1.005116 | 1.033717 | 0.007520 | 0.001213 | 0.166686 | 0.683075 |
| hyperlipidemia_times | 0.951299 | 0.916292 | 0.987642 | 0.009054 | 0.000107 | 0.014665 | 0.903612 |
| clopidogrel_hours_diff_median | 1.000898 | 0.998457 | 1.003344 | 0.471361 | 0.008062 | 1.107785 | 0.292566 |

Apixaban

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|-------------|----------|
| gender | 1.511769 | 1.312815 | 1.740875 | < 0.0001 | 0.073141 | 10.163455 | 0.001433 |
| age | 1.037447 | 1.032145 | 1.042776 | < 0.0001 | 0.317803 | 44.160736 | < 0.0001 |
| with_psychosis | 0.766370 | 0.643675 | 0.912453 | 0.002797 | 0.079743 | 11.080828 | 0.000873 |
| with_hypertension | 1.318457 | 1.080854 | 1.608293 | 0.006394 | 0.136250 | 18.932838 | < 0.0001 |
| with_heart_type_disease | 1.174296 | 0.995411 | 1.385330 | 0.056726 | 0.168660 | 23.436433 | < 0.0001 |
| with_neurological_type_disease | 10.335577 | 8.899137 | 12.003878 | < 0.0001 | 12.165027 | 1690.408697 | < 0.0001 |
| with_diabetes | 0.924113 | 0.789444 | 1.081755 | 0.326061 | 0.000135 | 0.018776 | 0.891010 |
| with_hyperlipidemia | 0.877282 | 0.747762 | 1.029237 | 0.108188 | 0.024039 | 3.340381 | 0.067602 |
| apixaban | 0.304374 | 0.194627 | 0.476004 | < 0.0001 | 0.208629 | 28.990379 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.484031 | 1.290258 | 1.706904 | < 0.0001 | 0.079154 | 10.878020 | 0.000973 |
| age | 1.049530 | 1.044708 | 1.054375 | < 0.0001 | 1.752641 | 240.864399 | < 0.0001 |
| with_psychosis | 1.422972 | 1.191962 | 1.698753 | < 0.0001 | 0.002722 | 0.374074 | 0.540793 |
| hypertension_times | 0.944796 | 0.922233 | 0.967911 | < 0.0001 | 0.000880 | 0.121006 | 0.727946 |
| heart_type_disease_times | 0.998271 | 0.986537 | 1.010145 | 0.774249 | 0.047776 | 6.565842 | 0.010397 |
| neurological_type_disease_times | 1.081212 | 1.069276 | 1.093282 | < 0.0001 | 3.720240 | 511.270403 | < 0.0001 |
| diabetes_times | 1.018760 | 1.004569 | 1.033151 | 0.009404 | 0.000860 | 0.118197 | 0.730999 |
| hyperlipidemia_times | 0.951055 | 0.916349 | 0.987076 | 0.008150 | 0.000228 | 0.031335 | 0.859496 |
| apixaban_count | 0.774061 | 0.645568 | 0.928129 | 0.005687 | 0.121463 | 16.692523 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.488361 | 1.294018 | 1.711891 | < 0.0001 | 0.081487 | 11.198405 | 0.000819 |
| age | 1.049615 | 1.044799 | 1.054453 | < 0.0001 | 1.783019 | 245.033855 | < 0.0001 |
| with_psychosis | 1.419889 | 1.189362 | 1.695098 | 0.000105 | 0.002421 | 0.332707 | 0.564070 |
| hypertension_times | 0.944385 | 0.921743 | 0.967582 | < 0.0001 | 0.000598 | 0.082170 | 0.774378 |
| heart_type_disease_times | 0.997790 | 0.986088 | 1.009632 | 0.713264 | 0.036063 | 4.956064 | 0.026001 |
| neurological_type_disease_times | 1.081388 | 1.069473 | 1.093437 | < 0.0001 | 3.708814 | 509.688830 | < 0.0001 |
| diabetes_times | 1.018877 | 1.004662 | 1.033294 | 0.009085 | 0.001116 | 0.153318 | 0.695385 |
| hyperlipidemia_times | 0.951453 | 0.916693 | 0.987531 | 0.008774 | 0.000200 | 0.027481 | 0.868336 |
| apixaban_mean | 0.843986 | 0.764932 | 0.931209 | 0.000724 | 0.103839 | 14.270177 | 0.000158 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.488262 | 1.293926 | 1.711786 | < 0.0001 | 0.081240 | 11.164615 | 0.000834 |
| age | 1.049632 | 1.044815 | 1.054470 | < 0.0001 | 1.784211 | 245.200419 | < 0.0001 |
| with_psychosis | 1.421151 | 1.190440 | 1.696574 | 0.000101 | 0.002525 | 0.347023 | 0.555805 |
| hypertension_times | 0.944464 | 0.921827 | 0.967656 | < 0.0001 | 0.000635 | 0.087285 | 0.767659 |
| heart_type_disease_times | 0.997865 | 0.986160 | 1.009708 | 0.722548 | 0.036679 | 5.040684 | 0.024761 |
| neurological_type_disease_times | 1.081329 | 1.069413 | 1.093377 | < 0.0001 | 3.709803 | 509.830448 | < 0.0001 |
| diabetes_times | 1.018839 | 1.004618 | 1.033262 | 0.009260 | 0.001070 | 0.147108 | 0.701315 |
| hyperlipidemia_times | 0.951478 | 0.916717 | 0.987556 | 0.008808 | 0.000218 | 0.029945 | 0.862616 |
| apixaban_max | 0.848925 | 0.773330 | 0.931909 | 0.000577 | 0.112800 | 15.501867 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.488419 | 1.294075 | 1.711950 | < 0.0001 | 0.081686 | 11.225564 | 0.000807 |
| age | 1.049582 | 1.044765 | 1.054420 | < 0.0001 | 1.778886 | 244.460929 | < 0.0001 |
| with_psychosis | 1.416927 | 1.186862 | 1.691590 | 0.000116 | 0.002221 | 0.305181 | 0.580653 |
| hypertension_times | 0.944299 | 0.921658 | 0.967497 | < 0.0001 | 0.000582 | 0.079984 | 0.777320 |
| heart_type_disease_times | 0.997591 | 0.985887 | 1.009435 | 0.688806 | 0.034711 | 4.770173 | 0.028959 |
| neurological_type_disease_times | 1.081538 | 1.069621 | 1.093588 | < 0.0001 | 3.706701 | 509.388196 | < 0.0001 |
| diabetes_times | 1.018945 | 1.004738 | 1.033353 | 0.008798 | 0.001173 | 0.161215 | 0.688041 |
| hyperlipidemia_times | 0.951347 | 0.916582 | 0.987431 | 0.008642 | 0.000174 | 0.023968 | 0.876966 |
| apixaban_min | 0.845262 | 0.762401 | 0.937129 | 0.001406 | 0.087901 | 12.079727 | 0.000510 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.488354 | 1.294015 | 1.711879 | < 0.0001 | 0.081522 | 11.203240 | 0.000817 |
| age | 1.049612 | 1.044796 | 1.054450 | < 0.0001 | 1.783077 | 245.042096 | < 0.0001 |
| with_psychosis | 1.419865 | 1.189341 | 1.695069 | 0.000105 | 0.002427 | 0.333466 | 0.563626 |
| hypertension_times | 0.944347 | 0.921699 | 0.967552 | < 0.0001 | 0.000585 | 0.080400 | 0.776757 |
| heart_type_disease_times | 0.997799 | 0.986099 | 1.009637 | 0.714222 | 0.036112 | 4.962805 | 0.025900 |
| neurological_type_disease_times | 1.081378 | 1.069462 | 1.093427 | < 0.0001 | 3.708845 | 509.693850 | < 0.0001 |
| diabetes_times | 1.018872 | 1.004656 | 1.033289 | 0.009109 | 0.001109 | 0.152429 | 0.696226 |
| hyperlipidemia_times | 0.951524 | 0.916763 | 0.987603 | 0.008873 | 0.000208 | 0.028616 | 0.865668 |
| apixaban_median | 0.842936 | 0.763515 | 0.930618 | 0.000714 | 0.104938 | 14.421290 | 0.000146 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.482582 | 1.288996 | 1.705242 | < 0.0001 | 0.079691 | 10.951420 | 0.000936 |
| age | 1.049572 | 1.044749 | 1.054418 | < 0.0001 | 1.774680 | 243.883623 | < 0.0001 |
| with_psychosis | 1.418545 | 1.188168 | 1.693592 | 0.000110 | 0.002391 | 0.328596 | 0.566488 |
| hypertension_times | 0.944722 | 0.922140 | 0.967856 | < 0.0001 | 0.000689 | 0.094699 | 0.758287 |
| heart_type_disease_times | 0.997503 | 0.985772 | 1.009374 | 0.678744 | 0.036422 | 5.005259 | 0.025272 |
| neurological_type_disease_times | 1.081608 | 1.069684 | 1.093664 | < 0.0001 | 3.719979 | 511.214497 | < 0.0001 |
| diabetes_times | 1.018906 | 1.004752 | 1.033260 | 0.008685 | 0.001130 | 0.155352 | 0.693473 |
| hyperlipidemia_times | 0.951088 | 0.916338 | 0.987155 | 0.008273 | 0.000133 | 0.018291 | 0.892418 |
| apixaban_hours_diff_mean | 0.990085 | 0.982914 | 0.997308 | 0.007214 | 0.090239 | 12.400938 | 0.000429 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.481797 | 1.288303 | 1.704352 | < 0.0001 | 0.079013 | 10.858613 | 0.000984 |
| age | 1.049559 | 1.044735 | 1.054404 | < 0.0001 | 1.766779 | 242.805381 | < 0.0001 |
| with_psychosis | 1.422716 | 1.191718 | 1.698491 | < 0.0001 | 0.002773 | 0.381069 | 0.537033 |
| hypertension_times | 0.944897 | 0.922334 | 0.968013 | < 0.0001 | 0.000796 | 0.109403 | 0.740826 |
| heart_type_disease_times | 0.997927 | 0.986197 | 1.009797 | 0.730851 | 0.040824 | 5.610396 | 0.017856 |
| neurological_type_disease_times | 1.081366 | 1.069439 | 1.093426 | < 0.0001 | 3.725112 | 511.935710 | < 0.0001 |
| diabetes_times | 1.018817 | 1.004664 | 1.033170 | 0.009006 | 0.001170 | 0.160784 | 0.688436 |
| hyperlipidemia_times | 0.950988 | 0.916282 | 0.987009 | 0.008065 | 0.000122 | 0.016815 | 0.896827 |
| apixaban_hours_diff_max | 0.992920 | 0.987972 | 0.997893 | 0.005315 | 0.114923 | 15.793633 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.483399 | 1.289746 | 1.706129 | < 0.0001 | 0.080983 | 11.128126 | 0.000851 |
| age | 1.049434 | 1.044609 | 1.054281 | < 0.0001 | 1.753922 | 241.011304 | < 0.0001 |
| with_psychosis | 1.400811 | 1.173350 | 1.672367 | 0.000193 | 0.001368 | 0.187926 | 0.664649 |
| hypertension_times | 0.944156 | 0.921527 | 0.967341 | < 0.0001 | 0.000593 | 0.081498 | 0.775278 |
| heart_type_disease_times | 0.996046 | 0.984328 | 1.007904 | 0.511747 | 0.027886 | 3.831835 | 0.050290 |
| neurological_type_disease_times | 1.082462 | 1.070539 | 1.094518 | < 0.0001 | 3.707603 | 509.472025 | < 0.0001 |
| diabetes_times | 1.019335 | 1.005219 | 1.033649 | 0.007112 | 0.001448 | 0.198969 | 0.655555 |
| hyperlipidemia_times | 0.951471 | 0.916607 | 0.987660 | 0.009004 | 0.000137 | 0.018766 | 0.891039 |
| apixaban_hours_diff_min | 0.992370 | 0.983733 | 1.001083 | 0.085925 | 0.025126 | 3.452694 | 0.063151 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.483364 | 1.289686 | 1.706129 | < 0.0001 | 0.080118 | 11.009936 | 0.000907 |
| age | 1.049557 | 1.044734 | 1.054403 | < 0.0001 | 1.771921 | 243.500239 | < 0.0001 |
| with_psychosis | 1.415849 | 1.185906 | 1.690378 | 0.000120 | 0.002163 | 0.297179 | 0.585658 |
| hypertension_times | 0.944668 | 0.922089 | 0.967800 | < 0.0001 | 0.000666 | 0.091508 | 0.762270 |
| heart_type_disease_times | 0.997241 | 0.985510 | 1.009111 | 0.647174 | 0.034414 | 4.729194 | 0.029657 |
| neurological_type_disease_times | 1.081781 | 1.069860 | 1.093834 | < 0.0001 | 3.717030 | 510.800252 | < 0.0001 |
| diabetes_times | 1.018930 | 1.004770 | 1.033289 | 0.008630 | 0.001146 | 0.157507 | 0.691463 |
| hyperlipidemia_times | 0.951092 | 0.916316 | 0.987187 | 0.008327 | 0.000140 | 0.019293 | 0.889531 |
| apixaban_hours_diff_median | 0.990202 | 0.982761 | 0.997699 | 0.010511 | 0.076346 | 10.491640 | 0.001200 |

Rivaroxaban

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|-------------|----------|
| gender | 1.509168 | 1.310677 | 1.737719 | < 0.0001 | 0.077141 | 10.717300 | 0.001062 |
| age | 1.036628 | 1.031322 | 1.041962 | < 0.0001 | 0.300638 | 41.768036 | < 0.0001 |
| with_psychosis | 0.756846 | 0.635737 | 0.901027 | 0.001740 | 0.090265 | 12.540636 | 0.000398 |
| with_hypertension | 1.318135 | 1.079858 | 1.608988 | 0.006624 | 0.135022 | 18.758794 | < 0.0001 |
| with_heart_type_disease | 1.136166 | 0.962333 | 1.341400 | 0.131867 | 0.145780 | 20.253425 | < 0.0001 |
| with_neurological_type_disease | 10.144377 | 8.734584 | 11.781716 | < 0.0001 | 12.083958 | 1678.837786 | < 0.0001 |
| with_diabetes | 0.930854 | 0.795328 | 1.089475 | 0.372114 | 0.000107 | 0.014879 | 0.902915 |
| with_hyperlipidemia | 0.866269 | 0.738047 | 1.016768 | 0.079002 | 0.022224 | 3.087600 | 0.078894 |
| rivaroxaban | 0.408244 | 0.218395 | 0.763127 | 0.005001 | 0.065176 | 9.055037 | 0.002620 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.484833 | 1.291035 | 1.707722 | < 0.0001 | 0.081787 | 11.238693 | 0.000801 |
| age | 1.049199 | 1.044380 | 1.054041 | < 0.0001 | 1.730799 | 237.836263 | < 0.0001 |
| with_psychosis | 1.398725 | 1.171687 | 1.669756 | 0.000205 | 0.001485 | 0.204122 | 0.651415 |
| hypertension_times | 0.943997 | 0.921408 | 0.967140 | < 0.0001 | 0.000732 | 0.100598 | 0.751114 |
| heart_type_disease_times | 0.995933 | 0.984183 | 1.007824 | 0.501004 | 0.032816 | 4.509409 | 0.033711 |
| neurological_type_disease_times | 1.082732 | 1.070802 | 1.094794 | < 0.0001 | 3.713634 | 510.305945 | < 0.0001 |
| diabetes_times | 1.019172 | 1.004993 | 1.033552 | 0.007893 | 0.001030 | 0.141592 | 0.706704 |
| hyperlipidemia_times | 0.951697 | 0.916771 | 0.987954 | 0.009451 | 0.000181 | 0.024914 | 0.874582 |
| rivaroxaban_count | 0.889127 | 0.726983 | 1.087434 | 0.252629 | 0.033096 | 4.547898 | 0.032961 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.489005 | 1.294650 | 1.712537 | < 0.0001 | 0.084027 | 11.546895 | 0.000679 |
| age | 1.049246 | 1.044433 | 1.054082 | < 0.0001 | 1.752271 | 240.794625 | < 0.0001 |
| with_psychosis | 1.402581 | 1.174971 | 1.674284 | 0.000181 | 0.001657 | 0.227662 | 0.633264 |
| hypertension_times | 0.943932 | 0.921299 | 0.967121 | < 0.0001 | 0.000523 | 0.071855 | 0.788655 |
| heart_type_disease_times | 0.996477 | 0.984776 | 1.008318 | 0.558199 | 0.031766 | 4.365243 | 0.036682 |
| neurological_type_disease_times | 1.082350 | 1.070422 | 1.094410 | < 0.0001 | 3.702567 | 508.801739 | < 0.0001 |
| diabetes_times | 1.018884 | 1.004643 | 1.033327 | 0.009188 | 0.001142 | 0.156991 | 0.691943 |
| hyperlipidemia_times | 0.951882 | 0.916934 | 0.988163 | 0.009770 | 0.000233 | 0.031963 | 0.858109 |
| rivaroxaban_mean | 0.956377 | 0.922446 | 0.991557 | 0.015520 | 0.059015 | 8.109726 | 0.004404 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.488731 | 1.294413 | 1.712221 | < 0.0001 | 0.083953 | 11.536725 | 0.000683 |
| age | 1.049248 | 1.044434 | 1.054083 | < 0.0001 | 1.752378 | 240.809582 | < 0.0001 |
| with_psychosis | 1.402844 | 1.175195 | 1.674590 | 0.000179 | 0.001673 | 0.229921 | 0.631583 |
| hypertension_times | 0.943912 | 0.921280 | 0.967101 | < 0.0001 | 0.000523 | 0.071848 | 0.788666 |
| heart_type_disease_times | 0.996484 | 0.984782 | 1.008324 | 0.558910 | 0.031837 | 4.374968 | 0.036473 |
| neurological_type_disease_times | 1.082367 | 1.070440 | 1.094428 | < 0.0001 | 3.703506 | 508.931148 | < 0.0001 |
| diabetes_times | 1.018889 | 1.004649 | 1.033330 | 0.009163 | 0.001141 | 0.156747 | 0.692170 |
| hyperlipidemia_times | 0.951874 | 0.916927 | 0.988154 | 0.009755 | 0.000239 | 0.032817 | 0.856247 |
| rivaroxaban_max | 0.957725 | 0.924738 | 0.991888 | 0.015716 | 0.059650 | 8.197076 | 0.004197 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.489087 | 1.294720 | 1.712634 | < 0.0001 | 0.084038 | 11.548401 | 0.000678 |
| age | 1.049247 | 1.044433 | 1.054083 | < 0.0001 | 1.752283 | 240.795609 | < 0.0001 |
| with_psychosis | 1.402149 | 1.174605 | 1.673773 | 0.000183 | 0.001627 | 0.223562 | 0.636340 |
| hypertension_times | 0.943947 | 0.921314 | 0.967135 | < 0.0001 | 0.000523 | 0.071919 | 0.788563 |
| heart_type_disease_times | 0.996445 | 0.984745 | 1.008285 | 0.554578 | 0.031446 | 4.321216 | 0.037642 |
| neurological_type_disease_times | 1.082348 | 1.070421 | 1.094409 | < 0.0001 | 3.701903 | 508.708969 | < 0.0001 |
| diabetes_times | 1.018904 | 1.004668 | 1.033342 | 0.009088 | 0.001169 | 0.160604 | 0.688602 |
| hyperlipidemia_times | 0.951869 | 0.916925 | 0.988144 | 0.009739 | 0.000220 | 0.030195 | 0.862048 |
| rivaroxaban_min | 0.955576 | 0.920739 | 0.991732 | 0.016479 | 0.056797 | 7.804968 | 0.005211 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.489089 | 1.294721 | 1.712636 | < 0.0001 | 0.084033 | 11.547692 | 0.000679 |
| age | 1.049245 | 1.044431 | 1.054081 | < 0.0001 | 1.752142 | 240.776873 | < 0.0001 |
| with_psychosis | 1.402433 | 1.174844 | 1.674109 | 0.000181 | 0.001656 | 0.227563 | 0.633337 |
| hypertension_times | 0.943963 | 0.921331 | 0.967150 | < 0.0001 | 0.000525 | 0.072095 | 0.788311 |
| heart_type_disease_times | 0.996471 | 0.984769 | 1.008312 | 0.557490 | 0.031753 | 4.363416 | 0.036721 |
| neurological_type_disease_times | 1.082328 | 1.070401 | 1.094388 | < 0.0001 | 3.702287 | 508.762911 | < 0.0001 |
| diabetes_times | 1.018882 | 1.004642 | 1.033324 | 0.009192 | 0.001140 | 0.156598 | 0.692309 |
| hyperlipidemia_times | 0.951901 | 0.916951 | 0.988184 | 0.009801 | 0.000233 | 0.032043 | 0.857934 |
| rivaroxaban_median | 0.956650 | 0.922786 | 0.991758 | 0.015951 | 0.058643 | 8.058590 | 0.004530 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.485588 | 1.291687 | 1.708596 | < 0.0001 | 0.082066 | 11.277013 | 0.000785 |
| age | 1.049258 | 1.044440 | 1.054099 | < 0.0001 | 1.746432 | 239.984690 | < 0.0001 |
| with_psychosis | 1.401955 | 1.174394 | 1.673610 | 0.000185 | 0.001657 | 0.227637 | 0.633283 |
| hypertension_times | 0.944058 | 0.921461 | 0.967209 | < 0.0001 | 0.000613 | 0.084303 | 0.771550 |
| heart_type_disease_times | 0.995983 | 0.984263 | 1.007842 | 0.505076 | 0.028517 | 3.918651 | 0.047756 |
| neurological_type_disease_times | 1.082605 | 1.070678 | 1.094664 | < 0.0001 | 3.707217 | 509.424496 | < 0.0001 |
| diabetes_times | 1.019118 | 1.004941 | 1.033495 | 0.008059 | 0.001298 | 0.178350 | 0.672796 |
| hyperlipidemia_times | 0.951786 | 0.916875 | 0.988026 | 0.009549 | 0.000154 | 0.021200 | 0.884237 |
| rivaroxaban_hours_diff_mean | 0.990876 | 0.979961 | 1.001913 | 0.104841 | 0.033738 | 4.636018 | 0.031310 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.485253 | 1.291405 | 1.708198 | < 0.0001 | 0.082128 | 11.285648 | 0.000781 |
| age | 1.049233 | 1.044414 | 1.054074 | < 0.0001 | 1.742305 | 239.420668 | < 0.0001 |
| with_psychosis | 1.402353 | 1.174728 | 1.674084 | 0.000183 | 0.001742 | 0.239441 | 0.624611 |
| hypertension_times | 0.944011 | 0.921424 | 0.967152 | < 0.0001 | 0.000654 | 0.089891 | 0.764316 |
| heart_type_disease_times | 0.996009 | 0.984280 | 1.007877 | 0.508121 | 0.029990 | 4.121043 | 0.042355 |
| neurological_type_disease_times | 1.082676 | 1.070750 | 1.094734 | < 0.0001 | 3.718906 | 511.037278 | < 0.0001 |
| diabetes_times | 1.019121 | 1.004944 | 1.033498 | 0.008049 | 0.001200 | 0.164962 | 0.684630 |
| hyperlipidemia_times | 0.951698 | 0.916789 | 0.987935 | 0.009416 | 0.000141 | 0.019352 | 0.889362 |
| rivaroxaban_hours_diff_max | 0.994547 | 0.987348 | 1.001798 | 0.140112 | 0.043999 | 6.046165 | 0.013938 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.485413 | 1.291519 | 1.708417 | < 0.0001 | 0.081768 | 11.235905 | 0.000803 |
| age | 1.049285 | 1.044464 | 1.054129 | < 0.0001 | 1.744131 | 239.663365 | < 0.0001 |
| with_psychosis | 1.397367 | 1.170541 | 1.668145 | 0.000214 | 0.001325 | 0.182063 | 0.669607 |
| hypertension_times | 0.944023 | 0.921386 | 0.967215 | < 0.0001 | 0.000586 | 0.080491 | 0.776634 |
| heart_type_disease_times | 0.995649 | 0.983929 | 1.007509 | 0.470452 | 0.026366 | 3.622940 | 0.056991 |
| neurological_type_disease_times | 1.082683 | 1.070745 | 1.094753 | < 0.0001 | 3.701611 | 508.643154 | < 0.0001 |
| diabetes_times | 1.019321 | 1.005181 | 1.033660 | 0.007251 | 0.001461 | 0.200816 | 0.654064 |
| hyperlipidemia_times | 0.951707 | 0.916777 | 0.987968 | 0.009474 | 0.000145 | 0.019922 | 0.887757 |
| rivaroxaban_hours_diff_min | 0.989746 | 0.974771 | 1.004952 | 0.185176 | 0.016550 | 2.274147 | 0.131550 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.485479 | 1.291586 | 1.708480 | < 0.0001 | 0.081971 | 11.263963 | 0.000791 |
| age | 1.049265 | 1.044446 | 1.054107 | < 0.0001 | 1.746218 | 239.954299 | < 0.0001 |
| with_psychosis | 1.401184 | 1.173745 | 1.672695 | 0.000189 | 0.001584 | 0.217720 | 0.640784 |
| hypertension_times | 0.944107 | 0.921503 | 0.967265 | < 0.0001 | 0.000616 | 0.084604 | 0.771153 |
| heart_type_disease_times | 0.995935 | 0.984217 | 1.007793 | 0.500019 | 0.027968 | 3.843252 | 0.049949 |
| neurological_type_disease_times | 1.082561 | 1.070632 | 1.094623 | < 0.0001 | 3.704812 | 509.091807 | < 0.0001 |
| diabetes_times | 1.019133 | 1.004960 | 1.033505 | 0.007989 | 0.001321 | 0.181510 | 0.670079 |
| hyperlipidemia_times | 0.951854 | 0.916941 | 0.988096 | 0.009652 | 0.000158 | 0.021708 | 0.882866 |
| rivaroxaban_hours_diff_median | 0.990222 | 0.978473 | 1.002113 | 0.106656 | 0.030324 | 4.166955 | 0.041222 |

Dabigatran etexilate

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|-------------|----------|
| gender | 1.511374 | 1.312606 | 1.740241 | < 0.0001 | 0.075756 | 10.523933 | 0.001179 |
| age | 1.036775 | 1.031462 | 1.042116 | < 0.0001 | 0.300509 | 41.746541 | < 0.0001 |
| with_psychosis | 0.750222 | 0.630178 | 0.893134 | 0.001236 | 0.096309 | 13.379273 | 0.000255 |
| with_hypertension | 1.317801 | 1.079644 | 1.608494 | 0.006659 | 0.134645 | 18.704801 | < 0.0001 |
| with_heart_type_disease | 1.116266 | 0.945601 | 1.317734 | 0.193862 | 0.129334 | 17.967001 | < 0.0001 |
| with_neurological_type_disease | 10.168417 | 8.755152 | 11.809813 | < 0.0001 | 12.085320 | 1678.888065 | < 0.0001 |
| with_diabetes | 0.932175 | 0.796456 | 1.091022 | 0.381656 | < 0.0001 | 0.007331 | 0.931767 |
| with_hyperlipidemia | 0.862045 | 0.734466 | 1.011784 | 0.069279 | 0.020818 | 2.892080 | 0.089019 |
| dabigatran etexilate | 0.696067 | 0.330064 | 1.467927 | 0.341255 | < 0.0001 | < 0.0001 | 0.995142 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.483722 | 1.290044 | 1.706477 | < 0.0001 | 0.081321 | 11.174145 | 0.000830 |
| age | 1.049226 | 1.044402 | 1.054073 | < 0.0001 | 1.736011 | 238.542931 | < 0.0001 |
| with_psychosis | 1.391508 | 1.165659 | 1.661117 | 0.000256 | 0.001048 | 0.143962 | 0.704374 |
| hypertension_times | 0.943916 | 0.921281 | 0.967107 | < 0.0001 | 0.000612 | 0.084123 | 0.771787 |
| heart_type_disease_times | 0.995116 | 0.983319 | 1.007055 | 0.421053 | 0.023336 | 3.206590 | 0.073345 |
| neurological_type_disease_times | 1.083035 | 1.071084 | 1.095120 | < 0.0001 | 3.701272 | 508.586878 | < 0.0001 |
| diabetes_times | 1.019584 | 1.005488 | 1.033877 | 0.006324 | 0.001664 | 0.228593 | 0.632570 |
| hyperlipidemia_times | 0.951611 | 0.916680 | 0.987874 | 0.009340 | 0.000122 | 0.016793 | 0.896892 |
| dabigatran etexilate_count | 1.030428 | 0.804869 | 1.319198 | 0.812037 | 0.001433 | 0.196863 | 0.657266 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.484384 | 1.290593 | 1.707273 | < 0.0001 | 0.081141 | 11.149458 | 0.000841 |
| age | 1.049221 | 1.044397 | 1.054067 | < 0.0001 | 1.733450 | 238.191166 | < 0.0001 |
| with_psychosis | 1.391576 | 1.165729 | 1.661179 | 0.000255 | 0.001052 | 0.144556 | 0.703794 |
| hypertension_times | 0.943964 | 0.921338 | 0.967146 | < 0.0001 | 0.000623 | 0.085583 | 0.769870 |
| heart_type_disease_times | 0.995305 | 0.983536 | 1.007215 | 0.438079 | 0.023668 | 3.252215 | 0.071330 |
| neurological_type_disease_times | 1.082941 | 1.071000 | 1.095016 | < 0.0001 | 3.701053 | 508.556864 | < 0.0001 |
| diabetes_times | 1.019512 | 1.005406 | 1.033817 | 0.006560 | 0.001642 | 0.225586 | 0.634817 |
| hyperlipidemia_times | 0.951593 | 0.916672 | 0.987843 | 0.009290 | 0.000130 | 0.017814 | 0.893821 |
| dabigatran etexilate_mean | 0.999702 | 0.994402 | 1.005030 | 0.912544 | 0.001502 | 0.206371 | 0.649628 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.484486 | 1.290684 | 1.707389 | < 0.0001 | 0.081180 | 11.154877 | 0.000838 |
| age | 1.049221 | 1.044398 | 1.054067 | < 0.0001 | 1.733620 | 238.214404 | < 0.0001 |
| with_psychosis | 1.391550 | 1.165709 | 1.661145 | 0.000255 | 0.001051 | 0.144416 | 0.703930 |
| hypertension_times | 0.943966 | 0.921340 | 0.967147 | < 0.0001 | 0.000622 | 0.085498 | 0.769981 |
| heart_type_disease_times | 0.995326 | 0.983558 | 1.007235 | 0.440125 | 0.023785 | 3.268213 | 0.070637 |
| neurological_type_disease_times | 1.082932 | 1.070990 | 1.095007 | < 0.0001 | 3.701060 | 508.557572 | < 0.0001 |
| diabetes_times | 1.019504 | 1.005396 | 1.033811 | 0.006591 | 0.001633 | 0.224376 | 0.635726 |
| hyperlipidemia_times | 0.951588 | 0.916669 | 0.987837 | 0.009281 | 0.000130 | 0.017822 | 0.893800 |
| dabigatran etexilate_max | 0.999588 | 0.994325 | 1.004880 | 0.878496 | 0.001166 | 0.160251 | 0.688926 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.484278 | 1.290499 | 1.707154 | < 0.0001 | 0.081092 | 11.142722 | 0.000844 |
| age | 1.049221 | 1.044397 | 1.054067 | < 0.0001 | 1.733248 | 238.163545 | < 0.0001 |
| with_psychosis | 1.391609 | 1.165756 | 1.661220 | 0.000255 | 0.001053 | 0.144656 | 0.703696 |
| hypertension_times | 0.943962 | 0.921336 | 0.967144 | < 0.0001 | 0.000624 | 0.085722 | 0.769688 |
| heart_type_disease_times | 0.995283 | 0.983513 | 1.007193 | 0.435949 | 0.023551 | 3.236058 | 0.072037 |
| neurological_type_disease_times | 1.082951 | 1.071009 | 1.095026 | < 0.0001 | 3.701027 | 508.553653 | < 0.0001 |
| diabetes_times | 1.019521 | 1.005417 | 1.033823 | 0.006529 | 0.001650 | 0.226739 | 0.633953 |
| hyperlipidemia_times | 0.951598 | 0.916677 | 0.987850 | 0.009301 | 0.000130 | 0.017821 | 0.893802 |
| dabigatran etexilate_min | 0.999822 | 0.994507 | 1.005166 | 0.947873 | 0.001928 | 0.264879 | 0.606789 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.484384 | 1.290595 | 1.707272 | < 0.0001 | 0.081153 | 11.151172 | 0.000840 |
| age | 1.049221 | 1.044397 | 1.054067 | < 0.0001 | 1.733501 | 238.198130 | < 0.0001 |
| with_psychosis | 1.391572 | 1.165726 | 1.661174 | 0.000255 | 0.001052 | 0.144601 | 0.703750 |
| hypertension_times | 0.943964 | 0.921338 | 0.967146 | < 0.0001 | 0.000623 | 0.085568 | 0.769889 |
| heart_type_disease_times | 0.995306 | 0.983536 | 1.007216 | 0.438180 | 0.023687 | 3.254835 | 0.071216 |
| neurological_type_disease_times | 1.082941 | 1.070999 | 1.095016 | < 0.0001 | 3.701046 | 508.555894 | < 0.0001 |
| diabetes_times | 1.019512 | 1.005405 | 1.033817 | 0.006562 | 0.001640 | 0.225365 | 0.634983 |
| hyperlipidemia_times | 0.951592 | 0.916672 | 0.987843 | 0.009290 | 0.000130 | 0.017820 | 0.893806 |
| dabigatran etexilate_median | 0.999698 | 0.994404 | 1.005020 | 0.911156 | 0.001430 | 0.196453 | 0.657600 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.482262 | 1.288729 | 1.704858 | <0.0001 | 0.080673 | 11.085428 | 0.000870 |
| age | 1.049204 | 1.044379 | 1.054052 | <0.0001 | 1.729892 | 237.706481 | <0.0001 |
| with_psychosis | 1.391007 | 1.165234 | 1.660525 | 0.000260 | 0.001004 | 0.137993 | 0.710285 |
| hypertension_times | 0.943931 | 0.921294 | 0.967124 | <0.0001 | 0.000623 | 0.085593 | 0.769857 |
| heart_type_disease_times | 0.994955 | 0.983179 | 1.006872 | 0.405054 | 0.022079 | 3.033872 | 0.081546 |
| neurological_type_disease_times | 1.083086 | 1.071143 | 1.095163 | <0.0001 | 3.701020 | 508.561391 | <0.0001 |
| diabetes_times | 1.019594 | 1.005508 | 1.033878 | 0.006259 | 0.001746 | 0.239943 | 0.624248 |
| hyperlipidemia_times | 0.951774 | 0.916822 | 0.988058 | 0.009617 | 0.000139 | 0.019167 | 0.889890 |
| dabigatran_etexilate_hours_diff_mean | 1.004173 | 0.994202 | 1.014244 | 0.413437 | 0.015735 | 2.162233 | 0.141442 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|-------------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.483408 | 1.289748 | 1.706148 | <0.0001 | 0.081140 | 11.149382 | 0.000841 |
| age | 1.049217 | 1.044393 | 1.054063 | <0.0001 | 1.733900 | 238.253472 | <0.0001 |
| with_psychosis | 1.391309 | 1.165489 | 1.660882 | 0.000257 | 0.001021 | 0.140227 | 0.708056 |
| hypertension_times | 0.943934 | 0.921301 | 0.967123 | <0.0001 | 0.000612 | 0.084107 | 0.771807 |
| heart_type_disease_times | 0.995110 | 0.983336 | 1.007026 | 0.419600 | 0.023278 | 3.198561 | 0.073706 |
| neurological_type_disease_times | 1.083026 | 1.071083 | 1.095103 | <0.0001 | 3.701170 | 508.574167 | <0.0001 |
| diabetes_times | 1.019562 | 1.005467 | 1.033855 | 0.006379 | 0.001660 | 0.228151 | 0.632899 |
| hyperlipidemia_times | 0.951683 | 0.916745 | 0.987953 | 0.009457 | 0.000135 | 0.018535 | 0.891709 |
| dabigatran_etexilate_hours_diff_max | 1.001254 | 0.993818 | 1.008745 | 0.741811 | 0.003348 | 0.460024 | 0.497614 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|-------------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.481422 | 1.287997 | 1.703894 | <0.0001 | 0.080197 | 11.020324 | 0.000901 |
| age | 1.049190 | 1.044365 | 1.054039 | <0.0001 | 1.726203 | 237.206713 | <0.0001 |
| with_psychosis | 1.391071 | 1.165299 | 1.660584 | 0.000259 | 0.001005 | 0.138131 | 0.710147 |
| hypertension_times | 0.943981 | 0.921347 | 0.967171 | <0.0001 | 0.000643 | 0.088417 | 0.766200 |
| heart_type_disease_times | 0.994956 | 0.983196 | 1.006857 | 0.404548 | 0.021901 | 3.009522 | 0.082779 |
| neurological_type_disease_times | 1.083068 | 1.071126 | 1.095143 | <0.0001 | 3.700419 | 508.494290 | <0.0001 |
| diabetes_times | 1.019596 | 1.005523 | 1.033866 | 0.006207 | 0.001779 | 0.244447 | 0.621014 |
| hyperlipidemia_times | 0.951797 | 0.916850 | 0.988077 | 0.009642 | 0.000144 | 0.019806 | 0.888080 |
| dabigatran_etexilate_hours_diff_min | 1.007242 | 0.997928 | 1.016642 | 0.127909 | 0.039972 | 5.492775 | 0.019097 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.482194 | 1.288675 | 1.704775 | < 0.0001 | 0.080612 | 11.077047 | 0.000874 |
| age | 1.049202 | 1.044376 | 1.054049 | < 0.0001 | 1.729330 | 237.629860 | < 0.0001 |
| with_psychosis | 1.391129 | 1.165341 | 1.660665 | 0.000259 | 0.001007 | 0.138421 | 0.709857 |
| hypertension_times | 0.943935 | 0.921300 | 0.967127 | < 0.0001 | 0.000625 | 0.085878 | 0.769485 |
| heart_type_disease_times | 0.994956 | 0.983185 | 1.006868 | 0.405000 | 0.022130 | 3.040918 | 0.081193 |
| neurological_type_disease_times | 1.083086 | 1.071143 | 1.095162 | < 0.0001 | 3.701308 | 508.602383 | < 0.0001 |
| diabetes_times | 1.019598 | 1.005515 | 1.033878 | 0.006237 | 0.001746 | 0.239973 | 0.624227 |
| hyperlipidemia_times | 0.951766 | 0.916815 | 0.988049 | 0.009602 | 0.000140 | 0.019169 | 0.889883 |
| dabigatran etexilate_hours_diff_median | 1.004671 | 0.994481 | 1.014965 | 0.370262 | 0.017941 | 2.465346 | 0.116385 |

Cilostazol

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|-----------|-----------|-------------|----------|
| gender | 1.513456 | 1.314406 | 1.742650 | < 0.0001 | 0.076055 | 10.565976 | 0.001152 |
| age | 1.036814 | 1.031497 | 1.042158 | < 0.0001 | 0.301389 | 41.870359 | < 0.0001 |
| with_psychosis | 0.752546 | 0.632150 | 0.895872 | 0.001393 | 0.094385 | 13.112476 | 0.000293 |
| with_hypertension | 1.318048 | 1.079981 | 1.608594 | 0.006588 | 0.135340 | 18.802003 | < 0.0001 |
| with_heart_type_disease | 1.111440 | 0.941677 | 1.311808 | 0.2111529 | 0.132037 | 18.343186 | < 0.0001 |
| with_neurological_type_disease | 10.179232 | 8.764536 | 11.822276 | < 0.0001 | 12.093586 | 1680.097732 | < 0.0001 |
| with_diabetes | 0.940230 | 0.803376 | 1.100397 | 0.442539 | < 0.0001 | 0.002080 | 0.963621 |
| with_hyperlipidemia | 0.863626 | 0.735866 | 1.013568 | 0.072659 | 0.021677 | 3.011421 | 0.082683 |
| cilostazol | 0.196799 | 0.027650 | 1.400709 | 0.104497 | 0.028762 | 3.995715 | 0.045619 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.486128 | 1.292140 | 1.709239 | < 0.0001 | 0.081015 | 11.132519 | 0.000849 |
| age | 1.049290 | 1.044464 | 1.054138 | < 0.0001 | 1.736874 | 238.668024 | < 0.0001 |
| with_psychosis | 1.394993 | 1.168603 | 1.665240 | 0.000229 | 0.001074 | 0.147641 | 0.700801 |
| hypertension_times | 0.944094 | 0.921407 | 0.967340 | < 0.0001 | 0.000447 | 0.061412 | 0.804279 |
| heart_type_disease_times | 0.995238 | 0.983520 | 1.007095 | 0.429551 | 0.026373 | 3.623947 | 0.056956 |
| neurological_type_disease_times | 1.082585 | 1.070645 | 1.094658 | < 0.0001 | 3.705752 | 509.216386 | < 0.0001 |
| diabetes_times | 1.020331 | 1.006285 | 1.034573 | 0.004430 | 0.003112 | 0.427657 | 0.513142 |
| hyperlipidemia_times | 0.951954 | 0.917149 | 0.988080 | 0.009571 | 0.000153 | 0.021055 | 0.884629 |
| cilostazol_count | 0.392167 | 0.080620 | 1.907646 | 0.246149 | 0.023008 | 3.161623 | 0.075391 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.485861 | 1.291912 | 1.708926 | < 0.0001 | 0.081805 | 11.240955 | 0.000800 |
| age | 1.049277 | 1.044452 | 1.054125 | < 0.0001 | 1.741157 | 239.254285 | < 0.0001 |
| with_psychosis | 1.394389 | 1.168083 | 1.664540 | 0.000234 | 0.001140 | 0.156619 | 0.692290 |
| hypertension_times | 0.944082 | 0.921412 | 0.967310 | < 0.0001 | 0.000587 | 0.080699 | 0.776353 |
| heart_type_disease_times | 0.995224 | 0.983501 | 1.007086 | 0.428380 | 0.025383 | 3.487874 | 0.061823 |
| neurological_type_disease_times | 1.082672 | 1.070731 | 1.094746 | < 0.0001 | 3.697688 | 508.103260 | < 0.0001 |
| diabetes_times | 1.020078 | 1.006023 | 1.034330 | 0.004983 | 0.001910 | 0.262415 | 0.608467 |
| hyperlipidemia_times | 0.951974 | 0.917130 | 0.988143 | 0.009683 | 0.000208 | 0.028619 | 0.865661 |
| cilostazol_mean | 0.987817 | 0.967363 | 1.008702 | 0.250849 | 0.015228 | 2.092527 | 0.148024 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.485864 | 1.291914 | 1.708931 | < 0.0001 | 0.081789 | 11.238751 | 0.000801 |
| age | 1.049278 | 1.044452 | 1.054126 | < 0.0001 | 1.741251 | 239.267337 | < 0.0001 |
| with_psychosis | 1.394373 | 1.168070 | 1.664519 | 0.000234 | 0.001138 | 0.156366 | 0.692525 |
| hypertension_times | 0.944082 | 0.921411 | 0.967311 | < 0.0001 | 0.000583 | 0.080121 | 0.777133 |
| heart_type_disease_times | 0.995221 | 0.983499 | 1.007083 | 0.428145 | 0.025386 | 3.488260 | 0.061808 |
| neurological_type_disease_times | 1.082665 | 1.070724 | 1.094739 | < 0.0001 | 3.697845 | 508.125372 | < 0.0001 |
| diabetes_times | 1.020108 | 1.006049 | 1.034365 | 0.004929 | 0.001951 | 0.268115 | 0.604600 |
| hyperlipidemia_times | 0.951975 | 0.917134 | 0.988139 | 0.009677 | 0.000212 | 0.029079 | 0.864596 |
| cilostazol_max | 0.987820 | 0.967645 | 1.008416 | 0.244452 | 0.016006 | 2.199366 | 0.138070 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.485890 | 1.291939 | 1.708958 | < 0.0001 | 0.081824 | 11.243476 | 0.000799 |
| age | 1.049275 | 1.044449 | 1.054123 | < 0.0001 | 1.740898 | 239.218357 | < 0.0001 |
| with_psychosis | 1.394336 | 1.168034 | 1.664483 | 0.000234 | 0.001139 | 0.156447 | 0.692450 |
| hypertension_times | 0.944106 | 0.921446 | 0.967323 | < 0.0001 | 0.000598 | 0.082191 | 0.774350 |
| heart_type_disease_times | 0.995228 | 0.983504 | 1.007092 | 0.428889 | 0.025348 | 3.483144 | 0.062000 |
| neurological_type_disease_times | 1.082688 | 1.070747 | 1.094762 | < 0.0001 | 3.697499 | 508.076628 | < 0.0001 |
| diabetes_times | 1.019968 | 1.005930 | 1.034202 | 0.005171 | 0.001838 | 0.252539 | 0.615294 |
| hyperlipidemia_times | 0.952000 | 0.917145 | 0.988181 | 0.009746 | 0.000205 | 0.028235 | 0.866559 |
| cilostazol_min | 0.987971 | 0.967179 | 1.009211 | 0.264801 | 0.014134 | 1.942100 | 0.163444 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.485886 | 1.291934 | 1.708954 | < 0.0001 | 0.081808 | 11.241358 | 0.000800 |
| age | 1.049278 | 1.044452 | 1.054125 | < 0.0001 | 1.741114 | 239.248312 | < 0.0001 |
| with_psychosis | 1.394401 | 1.168093 | 1.664555 | 0.000234 | 0.001140 | 0.156607 | 0.692300 |
| hypertension_times | 0.944078 | 0.921407 | 0.967308 | < 0.0001 | 0.000588 | 0.080856 | 0.776141 |
| heart_type_disease_times | 0.995220 | 0.983497 | 1.007083 | 0.428036 | 0.025367 | 3.485637 | 0.061906 |
| neurological_type_disease_times | 1.082675 | 1.070735 | 1.094748 | < 0.0001 | 3.697580 | 508.088339 | < 0.0001 |
| diabetes_times | 1.020074 | 1.006021 | 1.034324 | 0.004983 | 0.001897 | 0.260731 | 0.609620 |
| hyperlipidemia_times | 0.951977 | 0.917132 | 0.988146 | 0.009689 | 0.000208 | 0.028630 | 0.865636 |
| cilostazol_median | 0.987854 | 0.967430 | 1.008708 | 0.251587 | 0.014987 | 2.059313 | 0.151281 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.485753 | 1.291813 | 1.708809 | < 0.0001 | 0.081337 | 11.176739 | 0.000829 |
| age | 1.049293 | 1.044467 | 1.054141 | < 0.0001 | 1.741998 | 239.371604 | < 0.0001 |
| with_psychosis | 1.395511 | 1.169041 | 1.665853 | 0.000225 | 0.001208 | 0.166061 | 0.683637 |
| hypertension_times | 0.944064 | 0.921372 | 0.967315 | < 0.0001 | 0.000508 | 0.069774 | 0.791667 |
| heart_type_disease_times | 0.995257 | 0.983539 | 1.007115 | 0.431434 | 0.025569 | 3.513493 | 0.060874 |
| neurological_type_disease_times | 1.082579 | 1.070640 | 1.094651 | < 0.0001 | 3.701987 | 508.697900 | < 0.0001 |
| diabetes_times | 1.020305 | 1.006256 | 1.034550 | 0.004490 | 0.002159 | 0.296635 | 0.586001 |
| hyperlipidemia_times | 0.952001 | 0.917187 | 0.988137 | 0.009659 | 0.000174 | 0.023973 | 0.876953 |
| cilostazol_hours_diff_mean | 0.965812 | 0.908490 | 1.026752 | 0.265156 | 0.021415 | 2.942742 | 0.086267 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.485857 | 1.291903 | 1.708929 | < 0.0001 | 0.081296 | 11.171165 | 0.000831 |
| age | 1.049295 | 1.044469 | 1.054143 | < 0.0001 | 1.740980 | 239.232825 | < 0.0001 |
| with_psychosis | 1.395460 | 1.168997 | 1.665794 | 0.000226 | 0.001189 | 0.163435 | 0.686014 |
| hypertension_times | 0.944080 | 0.921389 | 0.967331 | < 0.0001 | 0.000440 | 0.060421 | 0.805832 |
| heart_type_disease_times | 0.995256 | 0.983539 | 1.007114 | 0.431340 | 0.025610 | 3.519185 | 0.060665 |
| neurological_type_disease_times | 1.082568 | 1.070629 | 1.094640 | < 0.0001 | 3.706285 | 509.290777 | < 0.0001 |
| diabetes_times | 1.020320 | 1.006274 | 1.034562 | 0.004452 | 0.002689 | 0.369523 | 0.543265 |
| hyperlipidemia_times | 0.952009 | 0.917199 | 0.988139 | 0.009660 | 0.000176 | 0.024182 | 0.876423 |
| cilostazol_hours_diff_max | 0.969717 | 0.915685 | 1.026937 | 0.293137 | 0.024888 | 3.419946 | 0.064416 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.485361 | 1.291480 | 1.708349 | < 0.0001 | 0.081396 | 11.184680 | 0.000825 |
| age | 1.049283 | 1.044458 | 1.054131 | < 0.0001 | 1.740079 | 239.104724 | < 0.0001 |
| with_psychosis | 1.395008 | 1.168608 | 1.665269 | 0.000229 | 0.001147 | 0.157585 | 0.691391 |
| hypertension_times | 0.944019 | 0.921339 | 0.967257 | < 0.0001 | 0.000580 | 0.079699 | 0.777707 |
| heart_type_disease_times | 0.995239 | 0.983512 | 1.007105 | 0.429964 | 0.025163 | 3.457704 | 0.062960 |
| neurological_type_disease_times | 1.082698 | 1.070762 | 1.094768 | < 0.0001 | 3.700111 | 508.433441 | < 0.0001 |
| diabetes_times | 1.020042 | 1.005993 | 1.034287 | 0.005041 | 0.001716 | 0.235756 | 0.627289 |
| hyperlipidemia_times | 0.951934 | 0.917078 | 0.988113 | 0.009646 | 0.000154 | 0.021210 | 0.884208 |
| cilostazol_hours_diff_min | 0.964472 | 0.900089 | 1.033461 | 0.304777 | 0.010795 | 1.483358 | 0.223252 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.485741 | 1.291803 | 1.708793 | <0.0001 | 0.081335 | 11.176418 | 0.000829 |
| age | 1.049294 | 1.044468 | 1.054142 | <0.0001 | 1.741534 | 239.307046 | <0.0001 |
| with_psychosis | 1.395556 | 1.169077 | 1.665908 | 0.000225 | 0.001202 | 0.165205 | 0.684410 |
| hypertension_times | 0.944049 | 0.921356 | 0.967301 | <0.0001 | 0.000531 | 0.073017 | 0.786994 |
| heart_type_disease_times | 0.995263 | 0.983544 | 1.007121 | 0.431984 | 0.025633 | 3.522327 | 0.060550 |
| neurological_type_disease_times | 1.082585 | 1.070646 | 1.094657 | <0.0001 | 3.700184 | 508.448356 | <0.0001 |
| diabetes_times | 1.020301 | 1.006252 | 1.034546 | 0.004497 | 0.001989 | 0.273283 | 0.601139 |
| hyperlipidemia_times | 0.951984 | 0.917170 | 0.988120 | 0.009634 | 0.000167 | 0.023012 | 0.879426 |
| cilostazol_hours_diff_median | 0.965096 | 0.907076 | 1.026828 | 0.261403 | 0.018605 | 2.556529 | 0.109842 |

Enoxaparin

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|-------------|----------|
| gender | 1.490854 | 1.294485 | 1.717011 | < 0.0001 | 0.072358 | 10.052709 | 0.001522 |
| age | 1.036954 | 1.031657 | 1.042279 | < 0.0001 | 0.312911 | 43.472913 | < 0.0001 |
| with_psychosis | 0.772432 | 0.648720 | 0.919736 | 0.003738 | 0.086509 | 12.018702 | 0.000527 |
| with_hypertension | 1.334477 | 1.092939 | 1.629396 | 0.004621 | 0.137960 | 19.166838 | < 0.0001 |
| with_heart_type_disease | 1.125382 | 0.953086 | 1.328826 | 0.163552 | 0.129305 | 17.964423 | < 0.0001 |
| with_neurological_type_disease | 10.301877 | 8.870253 | 11.964559 | < 0.0001 | 12.114601 | 1683.088761 | < 0.0001 |
| with_diabetes | 0.928717 | 0.793483 | 1.086998 | 0.357041 | 0.000106 | 0.014672 | 0.903590 |
| with_hyperlipidemia | 0.866875 | 0.738531 | 1.017521 | 0.080551 | 0.021755 | 3.022493 | 0.082120 |
| enoxaparin | 0.578269 | 0.466608 | 0.716651 | < 0.0001 | 0.062235 | 8.646340 | 0.003278 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.452933 | 1.263137 | 1.671248 | < 0.0001 | 0.078431 | 10.779002 | 0.001027 |
| age | 1.049103 | 1.044300 | 1.053928 | < 0.0001 | 1.746818 | 240.071837 | < 0.0001 |
| with_psychosis | 1.390481 | 1.164153 | 1.660812 | 0.000276 | 0.002764 | 0.379806 | 0.537708 |
| hypertension_times | 0.943794 | 0.920027 | 0.968174 | < 0.0001 | 0.002758 | 0.379028 | 0.538125 |
| heart_type_disease_times | 0.999222 | 0.987838 | 1.010737 | 0.894063 | 0.025706 | 3.532833 | 0.060168 |
| neurological_type_disease_times | 1.092975 | 1.080452 | 1.105643 | < 0.0001 | 3.793047 | 521.292838 | < 0.0001 |
| diabetes_times | 1.018535 | 1.005121 | 1.032129 | 0.006627 | 0.000457 | 0.062875 | 0.802008 |
| hyperlipidemia_times | 0.959712 | 0.925075 | 0.995646 | 0.028334 | 0.000624 | 0.085733 | 0.769673 |
| enoxaparin_count | 0.832315 | 0.760958 | 0.910363 | < 0.0001 | 0.146862 | 20.183779 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.480861 | 1.287539 | 1.703210 | < 0.0001 | 0.081306 | 11.172296 | 0.000831 |
| age | 1.049195 | 1.044383 | 1.054029 | < 0.0001 | 1.744835 | 239.759677 | < 0.0001 |
| with_psychosis | 1.399323 | 1.172136 | 1.670544 | 0.000202 | 0.001396 | 0.191846 | 0.661386 |
| hypertension_times | 0.944866 | 0.922278 | 0.968007 | < 0.0001 | 0.000894 | 0.122824 | 0.725992 |
| heart_type_disease_times | 0.996126 | 0.984410 | 1.007982 | 0.520232 | 0.026101 | 3.586575 | 0.058251 |
| neurological_type_disease_times | 1.084260 | 1.072278 | 1.096375 | < 0.0001 | 3.711993 | 510.069069 | < 0.0001 |
| diabetes_times | 1.019078 | 1.005072 | 1.033280 | 0.007440 | 0.001320 | 0.181409 | 0.670166 |
| hyperlipidemia_times | 0.953563 | 0.918695 | 0.989753 | 0.012353 | 0.000247 | 0.033973 | 0.853765 |
| enoxaparin_mean | 0.996674 | 0.993220 | 1.000141 | 0.060044 | 0.015413 | 2.117856 | 0.145593 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.479337 | 1.286220 | 1.701448 | < 0.0001 | 0.081220 | 11.160640 | 0.000836 |
| age | 1.049181 | 1.044371 | 1.054014 | < 0.0001 | 1.745691 | 239.878352 | < 0.0001 |
| with_psychosis | 1.398771 | 1.171672 | 1.669887 | 0.000205 | 0.001450 | 0.199310 | 0.655280 |
| hypertension_times | 0.944754 | 0.922125 | 0.967938 | < 0.0001 | 0.000944 | 0.129770 | 0.718671 |
| heart_type_disease_times | 0.996458 | 0.984762 | 1.008292 | 0.555789 | 0.026336 | 3.618810 | 0.057132 |
| neurological_type_disease_times | 1.085076 | 1.073021 | 1.097266 | < 0.0001 | 3.715329 | 510.529751 | < 0.0001 |
| diabetes_times | 1.019045 | 1.005094 | 1.033190 | 0.007310 | 0.001285 | 0.176558 | 0.674349 |
| hyperlipidemia_times | 0.954162 | 0.919323 | 0.990321 | 0.013418 | 0.000270 | 0.037128 | 0.847206 |
| enoxaparin_max | 0.996513 | 0.993268 | 0.999770 | 0.035893 | 0.018922 | 2.600042 | 0.106864 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.482982 | 1.289383 | 1.705648 | < 0.0001 | 0.081369 | 11.181031 | 0.000827 |
| age | 1.049213 | 1.044399 | 1.054049 | < 0.0001 | 1.744219 | 239.674351 | < 0.0001 |
| with_psychosis | 1.400074 | 1.172737 | 1.671481 | 0.000197 | 0.001346 | 0.184966 | 0.667141 |
| hypertension_times | 0.945358 | 0.922693 | 0.968580 | < 0.0001 | 0.000850 | 0.116735 | 0.732604 |
| heart_type_disease_times | 0.995629 | 0.983884 | 1.007515 | 0.469403 | 0.025879 | 3.555987 | 0.059334 |
| neurological_type_disease_times | 1.083093 | 1.071184 | 1.095135 | < 0.0001 | 3.708806 | 509.629547 | < 0.0001 |
| diabetes_times | 1.019038 | 1.004921 | 1.033354 | 0.008058 | 0.001350 | 0.185468 | 0.666716 |
| hyperlipidemia_times | 0.952345 | 0.917413 | 0.988606 | 0.010438 | 0.000226 | 0.031058 | 0.860111 |
| enoxaparin_min | 0.997114 | 0.993503 | 1.000739 | 0.118551 | 0.012991 | 1.785133 | 0.181523 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.480463 | 1.287187 | 1.702760 | < 0.0001 | 0.081322 | 11.174529 | 0.000830 |
| age | 1.049192 | 1.044381 | 1.054025 | < 0.0001 | 1.744943 | 239.774752 | < 0.0001 |
| with_psychosis | 1.398839 | 1.171732 | 1.669964 | 0.000205 | 0.001404 | 0.192873 | 0.660537 |
| hypertension_times | 0.944587 | 0.922050 | 0.967676 | < 0.0001 | 0.000897 | 0.123221 | 0.725568 |
| heart_type_disease_times | 0.996234 | 0.984522 | 1.008086 | 0.531802 | 0.026118 | 3.588916 | 0.058169 |
| neurological_type_disease_times | 1.084495 | 1.072485 | 1.096639 | < 0.0001 | 3.712230 | 510.101881 | < 0.0001 |
| diabetes_times | 1.019140 | 1.005170 | 1.033304 | 0.007098 | 0.001324 | 0.181947 | 0.669706 |
| hyperlipidemia_times | 0.953925 | 0.919080 | 0.990092 | 0.012976 | 0.000248 | 0.034060 | 0.853580 |
| enoxaparin_median | 0.996580 | 0.993137 | 1.000036 | 0.052425 | 0.015909 | 2.186051 | 0.139269 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.471618 | 1.279311 | 1.692834 | < 0.0001 | 0.079102 | 10.870009 | 0.000978 |
| age | 1.049294 | 1.044483 | 1.054127 | < 0.0001 | 1.752423 | 240.812512 | < 0.0001 |
| with_psychosis | 1.414206 | 1.184539 | 1.688401 | 0.000127 | 0.002087 | 0.286843 | 0.592252 |
| hypertension_times | 0.947247 | 0.924472 | 0.970582 | < 0.0001 | 0.001076 | 0.147924 | 0.700528 |
| heart_type_disease_times | 0.994807 | 0.983036 | 1.006719 | 0.391288 | 0.023038 | 3.165805 | 0.075198 |
| neurological_type_disease_times | 1.084865 | 1.072856 | 1.097008 | < 0.0001 | 3.723704 | 511.699773 | < 0.0001 |
| diabetes_times | 1.018615 | 1.004469 | 1.032961 | 0.009740 | 0.001387 | 0.190657 | 0.662372 |
| hyperlipidemia_times | 0.951514 | 0.916688 | 0.987664 | 0.008991 | 0.000256 | 0.035241 | 0.851092 |
| enoxaparin_hours_diff_mean | 0.995665 | 0.992557 | 0.998783 | 0.006468 | 0.048846 | 6.712238 | 0.009577 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.469889 | 1.277923 | 1.690691 | < 0.0001 | 0.080374 | 11.044669 | 0.000890 |
| age | 1.049193 | 1.044385 | 1.054024 | < 0.0001 | 1.743905 | 239.640995 | < 0.0001 |
| with_psychosis | 1.417550 | 1.187348 | 1.692384 | 0.000114 | 0.001981 | 0.272154 | 0.601891 |
| hypertension_times | 0.948821 | 0.925333 | 0.972907 | < 0.0001 | 0.001161 | 0.159530 | 0.689591 |
| heart_type_disease_times | 0.995385 | 0.983708 | 1.007202 | 0.442378 | 0.023991 | 3.296815 | 0.069417 |
| neurological_type_disease_times | 1.086205 | 1.074191 | 1.098354 | < 0.0001 | 3.722771 | 511.569495 | < 0.0001 |
| diabetes_times | 1.018104 | 1.003927 | 1.032482 | 0.012147 | 0.001324 | 0.181988 | 0.669671 |
| hyperlipidemia_times | 0.950512 | 0.915464 | 0.986903 | 0.008104 | 0.000177 | 0.024292 | 0.876145 |
| enoxaparin_hours_diff_max | 0.996383 | 0.994041 | 0.998731 | 0.002546 | 0.045649 | 6.272974 | 0.012261 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.477748 | 1.284655 | 1.699863 | < 0.0001 | 0.080008 | 10.994003 | 0.000914 |
| age | 1.049314 | 1.044495 | 1.054155 | < 0.0001 | 1.743537 | 239.580719 | < 0.0001 |
| with_psychosis | 1.401524 | 1.173968 | 1.673189 | 0.000188 | 0.001344 | 0.184705 | 0.667362 |
| hypertension_times | 0.945611 | 0.923082 | 0.968689 | < 0.0001 | 0.000744 | 0.102245 | 0.749153 |
| heart_type_disease_times | 0.994603 | 0.982793 | 1.006555 | 0.374591 | 0.023859 | 3.278472 | 0.070197 |
| neurological_type_disease_times | 1.083358 | 1.071381 | 1.095468 | < 0.0001 | 3.706092 | 509.256984 | < 0.0001 |
| diabetes_times | 1.019172 | 1.005045 | 1.033498 | 0.007664 | 0.001534 | 0.210721 | 0.646204 |
| hyperlipidemia_times | 0.951689 | 0.916888 | 0.987811 | 0.009183 | 0.000175 | 0.024067 | 0.876714 |
| enoxaparin_hours_diff_min | 0.996983 | 0.993606 | 1.000372 | 0.080953 | 0.013478 | 1.852025 | 0.173551 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.472428 | 1.280019 | 1.693759 | < 0.0001 | 0.079089 | 10.868022 | 0.000979 |
| age | 1.049309 | 1.044496 | 1.054144 | < 0.0001 | 1.751363 | 240.664535 | < 0.0001 |
| with_psychosis | 1.412236 | 1.182906 | 1.686027 | 0.000135 | 0.001897 | 0.260740 | 0.609613 |
| hypertension_times | 0.947257 | 0.924443 | 0.970633 | < 0.0001 | 0.001006 | 0.138189 | 0.710088 |
| heart_type_disease_times | 0.994655 | 0.982868 | 1.006584 | 0.378306 | 0.023069 | 3.170026 | 0.075004 |
| neurological_type_disease_times | 1.084320 | 1.072337 | 1.096436 | < 0.0001 | 3.719516 | 511.119426 | < 0.0001 |
| diabetes_times | 1.018662 | 1.004479 | 1.033046 | 0.009746 | 0.001420 | 0.195163 | 0.658655 |
| hyperlipidemia_times | 0.951212 | 0.916354 | 0.987395 | 0.008641 | 0.000245 | 0.033635 | 0.854485 |
| enoxaparin_hours_diff_median | 0.995864 | 0.992725 | 0.999013 | 0.010091 | 0.041246 | 5.667870 | 0.017280 |

(資料來源：https://mimic-iv-drug-data-analysis-0--introduction-uwu-ting.streamlit.app/Cox_PH_Model)

附錄四

Cox 模型結果，全面呈現八種藥物(Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin) 對缺血性中風患者的風險影響，關於各項藥物，預測缺血型中風對照組診斷前三診斷排除的風險比詳細結果。

Aspirin

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.082390 | 0.990047 | 1.183346 | 0.081840 | 0.280430 | 15.538403 | < 0.0001 |
| age | 1.041980 | 1.038377 | 1.045596 | < 0.0001 | 0.976169 | 54.088809 | < 0.0001 |
| with_psychosis | 1.041308 | 0.933624 | 1.161412 | 0.467361 | 0.002873 | 0.159172 | 0.689920 |
| with_hypertension | 1.387889 | 1.204147 | 1.599668 | < 0.0001 | 0.570497 | 31.610793 | < 0.0001 |
| with_heart_type_disease | 1.833293 | 1.635486 | 2.055024 | < 0.0001 | 4.005696 | 221.952652 | < 0.0001 |
| with_neurological_type_disease | 2.951228 | 2.689780 | 3.238089 | < 0.0001 | 15.072355 | 835.148063 | < 0.0001 |
| with_diabetes | 1.205137 | 1.097361 | 1.323497 | < 0.0001 | 0.659650 | 36.550725 | < 0.0001 |
| with_hyperlipidemia | 1.570410 | 1.405272 | 1.754953 | < 0.0001 | 4.378500 | 242.609469 | < 0.0001 |
| aspirin | 0.759489 | 0.688827 | 0.837400 | < 0.0001 | 0.004816 | 0.266863 | 0.605445 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.199871 | 1.098286 | 1.310853 | < 0.0001 | 0.020964 | 1.150731 | 0.283399 |
| age | 1.057853 | 1.054650 | 1.061065 | < 0.0001 | 10.599295 | 581.801915 | < 0.0001 |
| with_psychosis | 1.546481 | 1.388711 | 1.722174 | < 0.0001 | 0.239821 | 13.163919 | 0.000286 |
| hypertension_times | 0.957270 | 0.939998 | 0.974859 | < 0.0001 | 0.567403 | 31.145101 | < 0.0001 |
| heart_type_disease_times | 1.015025 | 1.008609 | 1.021482 | < 0.0001 | 3.321655 | 182.327698 | < 0.0001 |
| neurological_type_disease_times | 1.032088 | 1.021066 | 1.043229 | < 0.0001 | 1.016294 | 55.785027 | < 0.0001 |
| diabetes_times | 1.012387 | 1.003128 | 1.021732 | 0.008634 | 0.158815 | 8.717457 | 0.003152 |
| hyperlipidemia_times | 1.015234 | 0.993370 | 1.037579 | 0.173477 | 1.740923 | 95.560320 | < 0.0001 |
| aspirin_count | 0.958978 | 0.938561 | 0.979838 | 0.000136 | 0.992543 | 54.481307 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.156015 | 1.057908 | 1.263219 | 0.001355 | 0.100368 | 5.510839 | 0.018901 |
| age | 1.056663 | 1.053412 | 1.059925 | < 0.0001 | 8.396225 | 461.006129 | < 0.0001 |
| with_psychosis | 1.555316 | 1.396311 | 1.732429 | < 0.0001 | 0.269174 | 14.779349 | 0.000121 |
| hypertension_times | 0.951451 | 0.934361 | 0.968853 | < 0.0001 | 0.441490 | 24.240634 | < 0.0001 |
| heart_type_disease_times | 1.007669 | 1.001810 | 1.013563 | 0.010240 | 1.754537 | 96.335237 | < 0.0001 |
| neurological_type_disease_times | 1.038970 | 1.027361 | 1.050710 | < 0.0001 | 1.066500 | 58.557633 | < 0.0001 |
| diabetes_times | 1.010003 | 1.000932 | 1.019157 | 0.030595 | 0.287840 | 15.804253 | < 0.0001 |
| hyperlipidemia_times | 1.006131 | 0.984512 | 1.028225 | 0.581284 | 1.239341 | 68.047690 | < 0.0001 |
| aspirin_mean | 1.001291 | 1.000859 | 1.001723 | < 0.0001 | 1.553689 | 85.307422 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.168519 | 1.069321 | 1.276920 | 0.000580 | 0.085614 | 4.699340 | 0.030176 |
| age | 1.057264 | 1.054023 | 1.060515 | < 0.0001 | 8.821463 | 484.210774 | < 0.0001 |
| with_psychosis | 1.549799 | 1.391411 | 1.726218 | < 0.0001 | 0.269185 | 14.775610 | 0.000121 |
| hypertension_times | 0.951807 | 0.934715 | 0.969211 | < 0.0001 | 0.438531 | 24.071008 | < 0.0001 |
| heart_type_disease_times | 1.007725 | 1.001818 | 1.013667 | 0.010297 | 1.640775 | 90.062256 | < 0.0001 |
| neurological_type_disease_times | 1.038328 | 1.026728 | 1.050058 | < 0.0001 | 1.063727 | 58.388081 | < 0.0001 |
| diabetes_times | 1.009928 | 1.000859 | 1.019080 | 0.031830 | 0.292437 | 16.051877 | < 0.0001 |
| hyperlipidemia_times | 1.006716 | 0.985114 | 1.028792 | 0.545301 | 1.240761 | 68.105480 | < 0.0001 |
| aspirin_max | 1.000545 | 1.000190 | 1.000901 | 0.002621 | 0.973122 | 53.414745 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.154812 | 1.056944 | 1.261743 | 0.001444 | 0.098660 | 5.417254 | 0.019941 |
| age | 1.056526 | 1.053279 | 1.059783 | < 0.0001 | 8.435874 | 463.199952 | < 0.0001 |
| with_psychosis | 1.553774 | 1.394910 | 1.730730 | < 0.0001 | 0.264372 | 14.516238 | 0.000139 |
| hypertension_times | 0.951501 | 0.934453 | 0.968860 | < 0.0001 | 0.448311 | 24.616005 | < 0.0001 |
| heart_type_disease_times | 1.008603 | 1.002810 | 1.014430 | 0.003561 | 1.963971 | 107.838402 | < 0.0001 |
| neurological_type_disease_times | 1.038495 | 1.026934 | 1.050187 | < 0.0001 | 1.056153 | 57.991631 | < 0.0001 |
| diabetes_times | 1.009560 | 1.000508 | 1.018693 | 0.038410 | 0.300339 | 16.491135 | < 0.0001 |
| hyperlipidemia_times | 1.007188 | 0.985635 | 1.029211 | 0.516376 | 1.276099 | 70.068476 | < 0.0001 |
| aspirin_min | 1.001740 | 1.001290 | 1.002190 | < 0.0001 | 1.625000 | 89.226052 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.156818 | 1.058714 | 1.264012 | 0.001274 | 0.099969 | 5.489271 | 0.019135 |
| age | 1.056671 | 1.053424 | 1.059927 | < 0.0001 | 8.403106 | 461.410999 | < 0.0001 |
| with_psychosis | 1.556522 | 1.397394 | 1.733770 | < 0.0001 | 0.268631 | 14.750391 | 0.000123 |
| hypertension_times | 0.951511 | 0.934426 | 0.968908 | < 0.0001 | 0.443005 | 24.325242 | < 0.0001 |
| heart_type_disease_times | 1.007918 | 1.002083 | 1.013787 | 0.007759 | 1.810405 | 99.408598 | < 0.0001 |
| neurological_type_disease_times | 1.038933 | 1.027367 | 1.050628 | < 0.0001 | 1.063091 | 58.373866 | < 0.0001 |
| diabetes_times | 1.009979 | 1.000910 | 1.019131 | 0.030959 | 0.286268 | 15.718853 | < 0.0001 |
| hyperlipidemia_times | 1.006436 | 0.984859 | 1.028485 | 0.561805 | 1.245627 | 68.396829 | < 0.0001 |
| aspirin_median | 1.001329 | 1.000916 | 1.001742 | < 0.0001 | 1.668619 | 91.623151 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.178391 | 1.078693 | 1.287302 | 0.000273 | 0.045115 | 2.475125 | 0.115663 |
| age | 1.057514 | 1.054281 | 1.060756 | < 0.0001 | 9.847331 | 540.252868 | < 0.0001 |
| with_psychosis | 1.530650 | 1.373644 | 1.705601 | < 0.0001 | 0.247581 | 13.582982 | 0.000228 |
| hypertension_times | 0.952437 | 0.935348 | 0.969838 | < 0.0001 | 0.464263 | 25.470824 | < 0.0001 |
| heart_type_disease_times | 1.008976 | 1.003206 | 1.014778 | 0.002257 | 2.276717 | 124.907241 | < 0.0001 |
| neurological_type_disease_times | 1.037416 | 1.025944 | 1.049016 | < 0.0001 | 1.024925 | 56.230350 | < 0.0001 |
| diabetes_times | 1.008965 | 0.999875 | 1.018137 | 0.053243 | 0.311193 | 17.072936 | < 0.0001 |
| hyperlipidemia_times | 1.009050 | 0.987579 | 1.030987 | 0.411653 | 1.395506 | 76.561454 | < 0.0001 |
| aspirin_hours_diff_mean | 1.000576 | 0.999934 | 1.001217 | 0.078468 | 0.002071 | 0.113604 | 0.736078 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.186850 | 1.086344 | 1.296653 | 0.000148 | 0.035456 | 1.945394 | 0.163087 |
| age | 1.057910 | 1.054694 | 1.061137 | < 0.0001 | 10.429132 | 572.219370 | < 0.0001 |
| with_psychosis | 1.547966 | 1.389139 | 1.724952 | < 0.0001 | 0.282846 | 15.519022 | < 0.0001 |
| hypertension_times | 0.952704 | 0.935605 | 0.970115 | < 0.0001 | 0.465607 | 25.546660 | < 0.0001 |
| heart_type_disease_times | 1.009758 | 1.003939 | 1.015611 | 0.000991 | 2.519385 | 138.232118 | < 0.0001 |
| neurological_type_disease_times | 1.036632 | 1.025246 | 1.048144 | < 0.0001 | 1.029284 | 56.474131 | < 0.0001 |
| diabetes_times | 1.009544 | 1.000475 | 1.018695 | 0.039093 | 0.273977 | 15.032393 | 0.000106 |
| hyperlipidemia_times | 1.009503 | 0.988069 | 1.031401 | 0.387709 | 1.432370 | 78.590423 | < 0.0001 |
| aspirin_hours_diff_max | 0.999886 | 0.999460 | 1.000313 | 0.601595 | 0.163671 | 8.980178 | 0.002730 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.178548 | 1.079003 | 1.287277 | 0.000264 | 0.051411 | 2.820821 | 0.093052 |
| age | 1.057280 | 1.054059 | 1.060511 | < 0.0001 | 9.466869 | 519.430050 | < 0.0001 |
| with_psychosis | 1.532813 | 1.376169 | 1.707286 | < 0.0001 | 0.234069 | 12.842922 | 0.000339 |
| hypertension_times | 0.952789 | 0.935681 | 0.970209 | < 0.0001 | 0.472909 | 25.947671 | < 0.0001 |
| heart_type_disease_times | 1.009568 | 1.003839 | 1.015331 | 0.001040 | 2.302519 | 126.335094 | < 0.0001 |
| neurological_type_disease_times | 1.037057 | 1.025655 | 1.048586 | < 0.0001 | 1.022878 | 56.123446 | < 0.0001 |
| diabetes_times | 1.008973 | 0.999888 | 1.018141 | 0.052908 | 0.320302 | 17.574394 | < 0.0001 |
| hyperlipidemia_times | 1.009594 | 0.988113 | 1.031543 | 0.384191 | 1.395363 | 76.561056 | < 0.0001 |
| aspirin_hours_diff_min | 1.001272 | 1.000677 | 1.001867 | < 0.0001 | 0.192169 | 10.543960 | 0.001166 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.178140 | 1.078506 | 1.286977 | 0.000276 | 0.046682 | 2.561109 | 0.109525 |
| age | 1.057438 | 1.054204 | 1.060682 | < 0.0001 | 9.746781 | 534.739575 | < 0.0001 |
| with_psychosis | 1.529801 | 1.373011 | 1.704496 | < 0.0001 | 0.243175 | 13.341376 | 0.000260 |
| hypertension_times | 0.952442 | 0.935345 | 0.969851 | < 0.0001 | 0.465269 | 25.526137 | < 0.0001 |
| heart_type_disease_times | 1.009042 | 1.003283 | 1.014834 | 0.002054 | 2.270695 | 124.577598 | < 0.0001 |
| neurological_type_disease_times | 1.037428 | 1.025968 | 1.049016 | < 0.0001 | 1.025081 | 56.239247 | < 0.0001 |
| diabetes_times | 1.008939 | 0.999848 | 1.018114 | 0.053985 | 0.314652 | 17.262828 | < 0.0001 |
| hyperlipidemia_times | 1.009138 | 0.987659 | 1.031085 | 0.407275 | 1.393045 | 76.426906 | < 0.0001 |
| aspirin_hours_diff_median | 1.000715 | 1.000045 | 1.001385 | 0.036407 | 0.013640 | 0.748310 | 0.387014 |

Warfarin

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.067280 | 0.976451 | 1.166558 | 0.151334 | 0.285378 | 15.812569 | < 0.0001 |
| age | 1.041898 | 1.038297 | 1.045512 | < 0.0001 | 0.974834 | 54.014788 | < 0.0001 |
| with_psychosis | 1.035591 | 0.928528 | 1.154998 | 0.529930 | 0.002749 | 0.152312 | 0.696336 |
| with_hypertension | 1.355881 | 1.176689 | 1.562362 | < 0.0001 | 0.567389 | 31.438573 | < 0.0001 |
| with_heart_type_disease | 1.769522 | 1.582764 | 1.978317 | < 0.0001 | 4.251897 | 235.594320 | < 0.0001 |
| with_neurological_type_disease | 2.988024 | 2.723222 | 3.278575 | < 0.0001 | 15.083321 | 835.755208 | < 0.0001 |
| with_diabetes | 1.180455 | 1.075289 | 1.295907 | 0.000493 | 0.655926 | 36.344370 | < 0.0001 |
| with_hyperlipidemia | 1.506942 | 1.349949 | 1.682193 | < 0.0001 | 4.452304 | 246.698716 | < 0.0001 |
| warfarin | 0.746332 | 0.661195 | 0.842432 | < 0.0001 | 0.003729 | 0.206624 | 0.649427 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.183444 | 1.083511 | 1.292594 | 0.000183 | 0.044490 | 2.441462 | 0.118169 |
| age | 1.057832 | 1.054631 | 1.061043 | < 0.0001 | 10.173066 | 558.257835 | < 0.0001 |
| with_psychosis | 1.543665 | 1.385995 | 1.719271 | < 0.0001 | 0.260252 | 14.281584 | 0.000157 |
| hypertension_times | 0.951780 | 0.934732 | 0.969140 | < 0.0001 | 0.481174 | 26.404915 | < 0.0001 |
| heart_type_disease_times | 1.012032 | 1.006020 | 1.018080 | < 0.0001 | 2.803038 | 153.819715 | < 0.0001 |
| neurological_type_disease_times | 1.040852 | 1.028702 | 1.053146 | < 0.0001 | 1.139165 | 62.512884 | < 0.0001 |
| diabetes_times | 1.008981 | 0.999838 | 1.018209 | 0.054232 | 0.338119 | 18.554640 | < 0.0001 |
| hyperlipidemia_times | 1.009108 | 0.987829 | 1.030844 | 0.404398 | 1.412158 | 77.493683 | < 0.0001 |
| warfarin_count | 0.989279 | 0.979951 | 0.998697 | 0.025770 | 0.473102 | 25.961981 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.186043 | 1.085729 | 1.295626 | 0.000154 | 0.046110 | 2.529740 | 0.111722 |
| age | 1.057876 | 1.054666 | 1.061096 | < 0.0001 | 10.129351 | 555.727771 | < 0.0001 |
| with_psychosis | 1.542351 | 1.384780 | 1.717851 | < 0.0001 | 0.253751 | 13.921598 | 0.000191 |
| hypertension_times | 0.952534 | 0.935454 | 0.969926 | < 0.0001 | 0.463007 | 25.402007 | < 0.0001 |
| heart_type_disease_times | 1.009735 | 1.003879 | 1.015626 | 0.001097 | 2.204312 | 120.935416 | < 0.0001 |
| neurological_type_disease_times | 1.037127 | 1.025684 | 1.048698 | < 0.0001 | 1.021964 | 56.068154 | < 0.0001 |
| diabetes_times | 1.009260 | 1.000210 | 1.018391 | 0.044887 | 0.306531 | 16.817224 | < 0.0001 |
| hyperlipidemia_times | 1.009242 | 0.987829 | 1.031120 | 0.400460 | 1.400742 | 76.849075 | < 0.0001 |
| warfarin_mean | 0.993654 | 0.965043 | 1.023113 | 0.669329 | 0.010792 | 0.592058 | 0.441626 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.187585 | 1.087201 | 1.297238 | 0.000136 | 0.043629 | 2.393596 | 0.121836 |
| age | 1.057904 | 1.054697 | 1.061120 | < 0.0001 | 10.221534 | 560.782347 | < 0.0001 |
| with_psychosis | 1.541805 | 1.384313 | 1.717214 | < 0.0001 | 0.252129 | 13.832511 | 0.000200 |
| hypertension_times | 0.952439 | 0.935354 | 0.969835 | < 0.0001 | 0.464014 | 25.457111 | < 0.0001 |
| heart_type_disease_times | 1.010306 | 1.004389 | 1.016258 | 0.000623 | 2.249716 | 123.425797 | < 0.0001 |
| neurological_type_disease_times | 1.037685 | 1.026141 | 1.049359 | < 0.0001 | 1.025798 | 56.278211 | < 0.0001 |
| diabetes_times | 1.009150 | 1.000094 | 1.018288 | 0.047658 | 0.309994 | 17.007151 | < 0.0001 |
| hyperlipidemia_times | 1.009038 | 0.987638 | 1.030901 | 0.410722 | 1.398310 | 76.715266 | < 0.0001 |
| warfarin_max | 0.988754 | 0.967605 | 1.010364 | 0.305234 | 0.000672 | 0.036873 | 0.847724 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.181636 | 1.081663 | 1.290848 | 0.000215 | 0.049740 | 2.729017 | 0.098543 |
| age | 1.057761 | 1.054545 | 1.060986 | < 0.0001 | 9.994165 | 548.332511 | < 0.0001 |
| with_psychosis | 1.546002 | 1.388014 | 1.721972 | < 0.0001 | 0.259246 | 14.223616 | 0.000162 |
| hypertension_times | 0.952573 | 0.935487 | 0.969972 | < 0.0001 | 0.464431 | 25.481138 | < 0.0001 |
| heart_type_disease_times | 1.009090 | 1.003301 | 1.014913 | 0.002051 | 2.193362 | 120.339398 | < 0.0001 |
| neurological_type_disease_times | 1.036899 | 1.025507 | 1.048417 | < 0.0001 | 1.023615 | 56.160883 | < 0.0001 |
| diabetes_times | 1.009460 | 1.000411 | 1.018590 | 0.040424 | 0.303938 | 16.675662 | < 0.0001 |
| hyperlipidemia_times | 1.009452 | 0.988005 | 1.031365 | 0.390554 | 1.403402 | 76.997998 | < 0.0001 |
| warfarin_min | 1.016640 | 0.979389 | 1.055308 | 0.386232 | 0.087407 | 4.795623 | 0.028534 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.186424 | 1.086087 | 1.296029 | 0.000150 | 0.045981 | 2.522673 | 0.112223 |
| age | 1.057886 | 1.054676 | 1.061106 | < 0.0001 | 10.135593 | 556.069850 | < 0.0001 |
| with_psychosis | 1.541951 | 1.384405 | 1.717425 | < 0.0001 | 0.253660 | 13.916596 | 0.000191 |
| hypertension_times | 0.952500 | 0.935425 | 0.969886 | < 0.0001 | 0.463110 | 25.407661 | < 0.0001 |
| heart_type_disease_times | 1.009812 | 1.003964 | 1.015695 | 0.000985 | 2.213065 | 121.415568 | < 0.0001 |
| neurological_type_disease_times | 1.037268 | 1.025781 | 1.048885 | < 0.0001 | 1.022167 | 56.079245 | < 0.0001 |
| diabetes_times | 1.009242 | 1.000196 | 1.018369 | 0.045220 | 0.306742 | 16.828790 | < 0.0001 |
| hyperlipidemia_times | 1.009237 | 0.987836 | 1.031102 | 0.400452 | 1.400353 | 76.827682 | < 0.0001 |
| warfarin_median | 0.991997 | 0.963828 | 1.020988 | 0.584566 | 0.009485 | 0.520371 | 0.470685 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.185008 | 1.084933 | 1.294313 | 0.000163 | 0.044816 | 2.458735 | 0.116876 |
| age | 1.057883 | 1.054665 | 1.061111 | < 0.0001 | 10.098064 | 554.010120 | < 0.0001 |
| with_psychosis | 1.543134 | 1.385536 | 1.718659 | < 0.0001 | 0.252833 | 13.871198 | 0.000196 |
| hypertension_times | 0.952550 | 0.935462 | 0.969951 | < 0.0001 | 0.463423 | 25.424760 | < 0.0001 |
| heart_type_disease_times | 1.009662 | 1.003776 | 1.015583 | 0.001267 | 2.201760 | 120.795178 | < 0.0001 |
| neurological_type_disease_times | 1.036968 | 1.025581 | 1.048482 | < 0.0001 | 1.022105 | 56.075771 | < 0.0001 |
| diabetes_times | 1.009268 | 1.000210 | 1.018408 | 0.044890 | 0.307007 | 16.843300 | < 0.0001 |
| hyperlipidemia_times | 1.009190 | 0.987746 | 1.031099 | 0.403832 | 1.402881 | 76.966268 | < 0.0001 |
| warfarin_hours_diff_mean | 0.999445 | 0.995789 | 1.003115 | 0.766694 | 0.006686 | 0.366837 | 0.544735 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.185161 | 1.085094 | 1.294456 | 0.000160 | 0.042954 | 2.356720 | 0.124747 |
| age | 1.058023 | 1.054816 | 1.061239 | < 0.0001 | 10.353069 | 568.026879 | < 0.0001 |
| with_psychosis | 1.543813 | 1.386127 | 1.719437 | < 0.0001 | 0.254153 | 13.944239 | 0.000188 |
| hypertension_times | 0.952474 | 0.935365 | 0.969896 | < 0.0001 | 0.471782 | 25.884564 | < 0.0001 |
| heart_type_disease_times | 1.011524 | 1.005557 | 1.017527 | 0.000147 | 2.438664 | 133.798649 | < 0.0001 |
| neurological_type_disease_times | 1.038211 | 1.026685 | 1.049866 | < 0.0001 | 1.047720 | 57.483743 | < 0.0001 |
| diabetes_times | 1.008926 | 0.999843 | 1.018092 | 0.054112 | 0.318718 | 17.486633 | < 0.0001 |
| hyperlipidemia_times | 1.008294 | 0.986870 | 1.030182 | 0.450983 | 1.376485 | 75.521625 | < 0.0001 |
| warfarin_hours_diff_max | 0.998100 | 0.996297 | 0.999905 | 0.039126 | 0.097772 | 5.364316 | 0.020555 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.182278 | 1.082436 | 1.291330 | 0.000199 | 0.047263 | 2.593242 | 0.107323 |
| age | 1.057640 | 1.054425 | 1.060864 | < 0.0001 | 9.940416 | 545.410356 | < 0.0001 |
| with_psychosis | 1.547507 | 1.389429 | 1.723569 | < 0.0001 | 0.259525 | 14.239602 | 0.000161 |
| hypertension_times | 0.952567 | 0.935482 | 0.969964 | < 0.0001 | 0.466600 | 25.601400 | < 0.0001 |
| heart_type_disease_times | 1.009023 | 1.003276 | 1.014803 | 0.002056 | 2.235921 | 122.680432 | < 0.0001 |
| neurological_type_disease_times | 1.036845 | 1.025432 | 1.048384 | < 0.0001 | 1.020854 | 56.012168 | < 0.0001 |
| diabetes_times | 1.009481 | 1.000431 | 1.018612 | 0.039990 | 0.304638 | 16.714885 | < 0.0001 |
| hyperlipidemia_times | 1.009931 | 0.988501 | 1.031826 | 0.366502 | 1.414186 | 77.593492 | < 0.0001 |
| warfarin_hours_diff_min | 1.004523 | 1.000271 | 1.008794 | 0.037067 | 0.183817 | 10.085673 | 0.001495 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.184315 | 1.084288 | 1.293569 | 0.000172 | 0.045470 | 2.494627 | 0.114238 |
| age | 1.057820 | 1.054601 | 1.061049 | < 0.0001 | 10.044379 | 551.069150 | < 0.0001 |
| with_psychosis | 1.543501 | 1.385862 | 1.719071 | < 0.0001 | 0.253622 | 13.914585 | 0.000191 |
| hypertension_times | 0.952577 | 0.935491 | 0.969975 | < 0.0001 | 0.464170 | 25.465968 | < 0.0001 |
| heart_type_disease_times | 1.009334 | 1.003470 | 1.015232 | 0.001777 | 2.182892 | 119.760942 | < 0.0001 |
| neurological_type_disease_times | 1.036885 | 1.025497 | 1.048399 | < 0.0001 | 1.021152 | 56.023888 | < 0.0001 |
| diabetes_times | 1.009377 | 1.000320 | 1.018516 | 0.042399 | 0.305501 | 16.760830 | < 0.0001 |
| hyperlipidemia_times | 1.009373 | 0.987931 | 1.031281 | 0.394428 | 1.405745 | 77.124006 | < 0.0001 |
| warfarin_hours_diff_median | 1.000323 | 0.996515 | 1.004146 | 0.868276 | 0.022150 | 1.215229 | 0.270302 |

Clopidogrel

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.053621 | 0.963620 | 1.152029 | 0.251576 | 0.332853 | 18.458335 | < 0.0001 |
| age | 1.041547 | 1.037940 | 1.045167 | < 0.0001 | 0.999505 | 55.427522 | < 0.0001 |
| with_psychosis | 1.042660 | 0.934828 | 1.162931 | 0.453247 | 0.003805 | 0.211011 | 0.645977 |
| with_hypertension | 1.343156 | 1.165189 | 1.548306 | < 0.0001 | 0.524957 | 29.111499 | < 0.0001 |
| with_heart_type_disease | 1.655985 | 1.479965 | 1.852940 | < 0.0001 | 3.169659 | 175.773375 | < 0.0001 |
| with_neurological_type_disease | 2.960934 | 2.698557 | 3.248822 | < 0.0001 | 15.324717 | 849.831774 | < 0.0001 |
| with_diabetes | 1.171313 | 1.066713 | 1.286170 | 0.000923 | 0.552728 | 30.651506 | < 0.0001 |
| with_hyperlipidemia | 1.488914 | 1.332754 | 1.663371 | < 0.0001 | 3.891598 | 215.808482 | < 0.0001 |
| clopidogrel | 1.101795 | 0.980350 | 1.238285 | 0.103757 | 1.603986 | 88.949009 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.185362 | 1.085247 | 1.294713 | 0.000159 | 0.044497 | 2.441252 | 0.118185 |
| age | 1.057848 | 1.054640 | 1.061066 | < 0.0001 | 10.266433 | 563.245857 | < 0.0001 |
| with_psychosis | 1.541053 | 1.383343 | 1.716743 | < 0.0001 | 0.252965 | 13.878411 | 0.000195 |
| hypertension_times | 0.952354 | 0.935305 | 0.969713 | < 0.0001 | 0.464804 | 25.500471 | < 0.0001 |
| heart_type_disease_times | 1.009809 | 1.003884 | 1.015770 | 0.001151 | 2.075437 | 113.864433 | < 0.0001 |
| neurological_type_disease_times | 1.037730 | 1.025660 | 1.049942 | < 0.0001 | 1.024875 | 56.227554 | < 0.0001 |
| diabetes_times | 1.009471 | 1.000423 | 1.018601 | 0.040166 | 0.311008 | 17.062807 | < 0.0001 |
| hyperlipidemia_times | 1.009918 | 0.988395 | 1.031910 | 0.369214 | 1.377356 | 75.565704 | < 0.0001 |
| clopidogrel_count | 0.993516 | 0.964072 | 1.023860 | 0.671717 | 0.001581 | 0.086722 | 0.768387 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.173270 | 1.074004 | 1.281711 | 0.000396 | 0.063423 | 3.481322 | 0.062068 |
| age | 1.057470 | 1.054249 | 1.060700 | < 0.0001 | 9.666012 | 530.574745 | < 0.0001 |
| with_psychosis | 1.552858 | 1.394201 | 1.729570 | < 0.0001 | 0.266385 | 14.622055 | 0.000131 |
| hypertension_times | 0.953753 | 0.936612 | 0.971209 | < 0.0001 | 0.510845 | 28.040657 | < 0.0001 |
| heart_type_disease_times | 1.007744 | 1.001855 | 1.013667 | 0.009890 | 1.748395 | 95.970747 | < 0.0001 |
| neurological_type_disease_times | 1.037549 | 1.026202 | 1.049021 | < 0.0001 | 1.075130 | 59.014721 | < 0.0001 |
| diabetes_times | 1.009165 | 1.000102 | 1.018310 | 0.047467 | 0.318837 | 17.501214 | < 0.0001 |
| hyperlipidemia_times | 1.007224 | 0.985606 | 1.029315 | 0.515548 | 1.280032 | 70.261940 | < 0.0001 |
| clopidogrel_mean | 1.001611 | 1.000771 | 1.002451 | 0.000169 | 0.997521 | 54.754669 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.180013 | 1.080240 | 1.289002 | 0.000240 | 0.052573 | 2.884862 | 0.089419 |
| age | 1.057704 | 1.054490 | 1.060927 | < 0.0001 | 9.973808 | 547.294372 | < 0.0001 |
| with_psychosis | 1.547137 | 1.389102 | 1.723151 | < 0.0001 | 0.260603 | 14.300134 | 0.000156 |
| hypertension_times | 0.953076 | 0.935959 | 0.970507 | < 0.0001 | 0.488166 | 26.787203 | < 0.0001 |
| heart_type_disease_times | 1.008548 | 1.002690 | 1.014441 | 0.004187 | 1.951203 | 107.068647 | < 0.0001 |
| neurological_type_disease_times | 1.037322 | 1.025924 | 1.048848 | < 0.0001 | 1.051998 | 57.726477 | < 0.0001 |
| diabetes_times | 1.009321 | 1.000252 | 1.018472 | 0.043949 | 0.311958 | 17.118132 | < 0.0001 |
| hyperlipidemia_times | 1.008410 | 0.986870 | 1.030419 | 0.447132 | 1.335804 | 73.299760 | < 0.0001 |
| clopidogrel_max | 1.000495 | 0.999943 | 1.001047 | 0.078707 | 0.369348 | 20.267304 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.172586 | 1.073432 | 1.280898 | 0.000412 | 0.069073 | 3.792010 | 0.051500 |
| age | 1.057453 | 1.054232 | 1.060683 | < 0.0001 | 9.567574 | 525.243712 | < 0.0001 |
| with_psychosis | 1.555099 | 1.396189 | 1.732095 | < 0.0001 | 0.266608 | 14.636322 | 0.000130 |
| hypertension_times | 0.953833 | 0.936667 | 0.971315 | < 0.0001 | 0.520315 | 28.564433 | < 0.0001 |
| heart_type_disease_times | 1.007778 | 1.001911 | 1.013679 | 0.009301 | 1.690071 | 92.782065 | < 0.0001 |
| neurological_type_disease_times | 1.037456 | 1.026145 | 1.048891 | < 0.0001 | 1.084521 | 59.538350 | < 0.0001 |
| diabetes_times | 1.008951 | 0.999909 | 1.018075 | 0.052367 | 0.332904 | 18.275881 | < 0.0001 |
| hyperlipidemia_times | 1.006495 | 0.984836 | 1.028630 | 0.559722 | 1.241374 | 68.149330 | < 0.0001 |
| clopidogrel_min | 1.002254 | 1.001256 | 1.003253 | < 0.0001 | 1.266964 | 69.554171 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.171907 | 1.072780 | 1.280194 | 0.000435 | 0.066761 | 3.665068 | 0.055567 |
| age | 1.057427 | 1.054207 | 1.060657 | < 0.0001 | 9.605280 | 527.313830 | < 0.0001 |
| with_psychosis | 1.554804 | 1.395943 | 1.731744 | < 0.0001 | 0.267807 | 14.702170 | 0.000126 |
| hypertension_times | 0.953773 | 0.936625 | 0.971235 | < 0.0001 | 0.513875 | 28.210857 | < 0.0001 |
| heart_type_disease_times | 1.007700 | 1.001826 | 1.013608 | 0.010128 | 1.741192 | 95.588540 | < 0.0001 |
| neurological_type_disease_times | 1.037492 | 1.026162 | 1.048946 | < 0.0001 | 1.077900 | 59.174903 | < 0.0001 |
| diabetes_times | 1.009068 | 1.000018 | 1.018201 | 0.049546 | 0.322348 | 17.696376 | < 0.0001 |
| hyperlipidemia_times | 1.007096 | 0.985482 | 1.029185 | 0.522938 | 1.273053 | 69.888483 | < 0.0001 |
| clopidogrel_median | 1.001930 | 1.001102 | 1.002758 | < 0.0001 | 1.267446 | 69.580660 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.178665 | 1.079123 | 1.287388 | 0.000261 | 0.051464 | 2.824189 | 0.092857 |
| age | 1.057670 | 1.054458 | 1.060891 | < 0.0001 | 9.905565 | 543.583551 | < 0.0001 |
| with_psychosis | 1.542681 | 1.385128 | 1.718155 | < 0.0001 | 0.244324 | 13.407659 | 0.000251 |
| hypertension_times | 0.953161 | 0.935998 | 0.970637 | < 0.0001 | 0.499398 | 27.405253 | < 0.0001 |
| heart_type_disease_times | 1.008143 | 1.002331 | 1.013989 | 0.005975 | 1.943980 | 106.678976 | < 0.0001 |
| neurological_type_disease_times | 1.036410 | 1.025012 | 1.047935 | < 0.0001 | 1.029524 | 56.496786 | < 0.0001 |
| diabetes_times | 1.008859 | 0.999771 | 1.018029 | 0.056092 | 0.351822 | 19.306795 | < 0.0001 |
| hyperlipidemia_times | 1.008980 | 0.987393 | 1.031040 | 0.417822 | 1.380125 | 75.736569 | < 0.0001 |
| clopidogrel_hours_diff_mean | 1.001773 | 1.001091 | 1.002455 | < 0.0001 | 0.491514 | 26.972630 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.182100 | 1.082261 | 1.291150 | 0.000203 | 0.045830 | 2.514459 | 0.112809 |
| age | 1.057777 | 1.054567 | 1.060997 | < 0.0001 | 10.176676 | 558.338594 | < 0.0001 |
| with_psychosis | 1.541784 | 1.384317 | 1.717164 | < 0.0001 | 0.248865 | 13.653859 | 0.000220 |
| hypertension_times | 0.952981 | 0.935821 | 0.970457 | < 0.0001 | 0.474963 | 26.058600 | < 0.0001 |
| heart_type_disease_times | 1.008644 | 1.002803 | 1.014518 | 0.003676 | 2.120105 | 116.318555 | < 0.0001 |
| neurological_type_disease_times | 1.036431 | 1.025075 | 1.047912 | < 0.0001 | 1.025059 | 56.239368 | < 0.0001 |
| diabetes_times | 1.008751 | 0.999662 | 1.017922 | 0.059189 | 0.330871 | 18.153093 | < 0.0001 |
| hyperlipidemia_times | 1.008910 | 0.987361 | 1.030929 | 0.420662 | 1.390870 | 76.309422 | < 0.0001 |
| clopidogrel_hours_diff_max | 1.000545 | 0.999931 | 1.001159 | 0.081974 | 0.061315 | 3.364001 | 0.066639 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.174163 | 1.074926 | 1.282561 | 0.000366 | 0.057336 | 3.147491 | 0.076047 |
| age | 1.057409 | 1.054193 | 1.060635 | < 0.0001 | 9.651055 | 529.795633 | < 0.0001 |
| with_psychosis | 1.542844 | 1.385215 | 1.718410 | < 0.0001 | 0.249110 | 13.674931 | 0.000217 |
| hypertension_times | 0.953312 | 0.936232 | 0.970703 | < 0.0001 | 0.511547 | 28.081399 | < 0.0001 |
| heart_type_disease_times | 1.008278 | 1.002495 | 1.014095 | 0.004972 | 2.011319 | 110.411544 | < 0.0001 |
| neurological_type_disease_times | 1.037181 | 1.025719 | 1.048770 | < 0.0001 | 1.041327 | 57.163774 | < 0.0001 |
| diabetes_times | 1.009254 | 1.000181 | 1.018409 | 0.045579 | 0.336106 | 18.450582 | < 0.0001 |
| hyperlipidemia_times | 1.009606 | 0.988079 | 1.031602 | 0.384646 | 1.386165 | 76.093680 | < 0.0001 |
| clopidogrel_hours_diff_min | 1.003884 | 1.002771 | 1.004999 | < 0.0001 | 1.152230 | 63.251800 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.178692 | 1.079153 | 1.287412 | 0.000260 | 0.052452 | 2.878547 | 0.089770 |
| age | 1.057672 | 1.054461 | 1.060893 | <0.0001 | 9.858570 | 541.037918 | <0.0001 |
| with_psychosis | 1.543994 | 1.386303 | 1.719621 | <0.0001 | 0.245007 | 13.445975 | 0.000246 |
| hypertension_times | 0.953033 | 0.935888 | 0.970493 | <0.0001 | 0.502442 | 27.573994 | <0.0001 |
| heart_type_disease_times | 1.008268 | 1.002473 | 1.014097 | 0.005116 | 1.953706 | 107.219293 | <0.0001 |
| neurological_type_disease_times | 1.036456 | 1.025037 | 1.048001 | <0.0001 | 1.028080 | 56.420965 | <0.0001 |
| diabetes_times | 1.009016 | 0.999942 | 1.018173 | 0.051484 | 0.350571 | 19.239324 | <0.0001 |
| hyperlipidemia_times | 1.009142 | 0.987590 | 1.031165 | 0.408683 | 1.380141 | 75.742087 | <0.0001 |
| clopidogrel_hours_diff_median | 1.001848 | 1.001213 | 1.002484 | <0.0001 | 0.611997 | 33.586351 | <0.0001 |

Apixaban

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.064561 | 0.973913 | 1.163647 | 0.168260 | 0.295632 | 16.388467 | < 0.0001 |
| age | 1.042237 | 1.038636 | 1.045851 | < 0.0001 | 1.031868 | 57.202015 | < 0.0001 |
| with_psychosis | 1.064056 | 0.954004 | 1.186803 | 0.265011 | 0.013242 | 0.734095 | 0.391561 |
| with_hypertension | 1.348527 | 1.170515 | 1.553611 | < 0.0001 | 0.573523 | 31.793487 | < 0.0001 |
| with_heart_type_disease | 1.762405 | 1.578629 | 1.967575 | < 0.0001 | 4.806267 | 266.437396 | < 0.0001 |
| with_neurological_type_disease | 2.971703 | 2.708435 | 3.260562 | < 0.0001 | 15.131810 | 838.838047 | < 0.0001 |
| with_diabetes | 1.173620 | 1.069024 | 1.288449 | 0.000775 | 0.643560 | 35.676019 | < 0.0001 |
| with_hyperlipidemia | 1.517019 | 1.359132 | 1.693247 | < 0.0001 | 4.537964 | 251.563903 | < 0.0001 |
| apixaban | 0.350436 | 0.268899 | 0.456697 | < 0.0001 | 0.919821 | 50.990680 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.186793 | 1.086635 | 1.296182 | 0.000141 | 0.049107 | 2.696258 | 0.100587 |
| age | 1.058413 | 1.055209 | 1.061626 | < 0.0001 | 10.413283 | 571.749272 | < 0.0001 |
| with_psychosis | 1.579548 | 1.418259 | 1.759179 | < 0.0001 | 0.330721 | 18.158472 | < 0.0001 |
| hypertension_times | 0.952382 | 0.935289 | 0.969787 | < 0.0001 | 0.491216 | 26.970579 | < 0.0001 |
| heart_type_disease_times | 1.012390 | 1.006798 | 1.018013 | < 0.0001 | 2.983757 | 163.825479 | < 0.0001 |
| neurological_type_disease_times | 1.035419 | 1.024230 | 1.046730 | < 0.0001 | 1.043740 | 57.307341 | < 0.0001 |
| diabetes_times | 1.007780 | 0.998702 | 1.016941 | 0.093240 | 0.342051 | 18.780585 | < 0.0001 |
| hyperlipidemia_times | 1.010897 | 0.989683 | 1.032565 | 0.316551 | 1.404721 | 77.127295 | < 0.0001 |
| apixaban_count | 0.699989 | 0.618679 | 0.791985 | < 0.0001 | 1.532665 | 84.152132 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|--------|
| gender | 1.190746 | 1.090242 | 1.300516 | 0.000104 | 0.043780 | 2.402709 | 0.1211 |
| age | 1.058266 | 1.055064 | 1.061477 | < 0.0001 | 10.536623 | 578.270684 | < 0.00 |
| with_psychosis | 1.570888 | 1.410434 | 1.749595 | < 0.0001 | 0.298252 | 16.368684 | < 0.00 |
| hypertension_times | 0.951927 | 0.934827 | 0.969340 | < 0.0001 | 0.461275 | 25.315671 | < 0.00 |
| heart_type_disease_times | 1.011427 | 1.005773 | 1.017113 | < 0.0001 | 2.590364 | 142.164306 | < 0.00 |
| neurological_type_disease_times | 1.035770 | 1.024516 | 1.047148 | < 0.0001 | 1.027958 | 56.416390 | < 0.00 |
| diabetes_times | 1.008338 | 0.999220 | 1.017540 | 0.073206 | 0.324426 | 17.805158 | < 0.00 |
| hyperlipidemia_times | 1.010993 | 0.989710 | 1.032734 | 0.313875 | 1.418864 | 77.870052 | < 0.00 |
| apixaban_mean | 0.846595 | 0.798712 | 0.897348 | < 0.0001 | 0.683963 | 37.537225 | < 0.00 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.190555 | 1.090068 | 1.300306 | 0.000106 | 0.044118 | 2.421372 | 0.119693 |
| age | 1.058275 | 1.055073 | 1.061486 | < 0.0001 | 10.543444 | 578.662723 | < 0.0001 |
| with_psychosis | 1.571821 | 1.411283 | 1.750620 | < 0.0001 | 0.301363 | 16.539884 | < 0.0001 |
| hypertension_times | 0.952054 | 0.934952 | 0.969468 | < 0.0001 | 0.464652 | 25.501808 | < 0.0001 |
| heart_type_disease_times | 1.011489 | 1.005835 | 1.017174 | < 0.0001 | 2.602086 | 142.811962 | < 0.0001 |
| neurological_type_disease_times | 1.035741 | 1.024494 | 1.047111 | < 0.0001 | 1.029154 | 56.483747 | < 0.0001 |
| diabetes_times | 1.008226 | 0.999096 | 1.017440 | 0.077543 | 0.326324 | 17.909875 | < 0.0001 |
| hyperlipidemia_times | 1.011054 | 0.989765 | 1.032800 | 0.311313 | 1.420877 | 77.982913 | < 0.0001 |
| apixaban_max | 0.853618 | 0.808244 | 0.901540 | < 0.0001 | 0.743892 | 40.827490 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.190908 | 1.090387 | 1.300696 | 0.000103 | 0.043475 | 2.385870 | 0.122440 |
| age | 1.058238 | 1.055036 | 1.061450 | < 0.0001 | 10.518284 | 577.240811 | < 0.0001 |
| with_psychosis | 1.568464 | 1.408249 | 1.746906 | < 0.0001 | 0.293372 | 16.100206 | < 0.0001 |
| hypertension_times | 0.951859 | 0.934768 | 0.969263 | < 0.0001 | 0.459277 | 25.205002 | < 0.0001 |
| heart_type_disease_times | 1.011310 | 1.005650 | 1.017002 | < 0.0001 | 2.569983 | 141.040053 | < 0.0001 |
| neurological_type_disease_times | 1.035835 | 1.024562 | 1.047233 | < 0.0001 | 1.026037 | 56.308684 | < 0.0001 |
| diabetes_times | 1.008432 | 0.999321 | 1.017625 | 0.069793 | 0.322949 | 17.723340 | < 0.0001 |
| hyperlipidemia_times | 1.010810 | 0.989519 | 1.032560 | 0.322209 | 1.416136 | 77.717176 | < 0.0001 |
| apixaban_min | 0.843312 | 0.792580 | 0.897291 | < 0.0001 | 0.604717 | 33.186735 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.190654 | 1.090158 | 1.300415 | 0.000105 | 0.043770 | 2.402166 | 0.121170 |
| age | 1.058257 | 1.055055 | 1.061468 | < 0.0001 | 10.531343 | 577.975562 | < 0.0001 |
| with_psychosis | 1.570491 | 1.410073 | 1.749159 | < 0.0001 | 0.297429 | 16.323340 | < 0.0001 |
| hypertension_times | 0.951896 | 0.934797 | 0.969309 | < 0.0001 | 0.460408 | 25.267844 | < 0.0001 |
| heart_type_disease_times | 1.011380 | 1.005727 | 1.017065 | < 0.0001 | 2.586677 | 141.960643 | < 0.0001 |
| neurological_type_disease_times | 1.035772 | 1.024515 | 1.047153 | < 0.0001 | 1.027680 | 56.400600 | < 0.0001 |
| diabetes_times | 1.008382 | 0.999269 | 1.017577 | 0.071524 | 0.324298 | 17.797932 | < 0.0001 |
| hyperlipidemia_times | 1.011037 | 0.989759 | 1.032772 | 0.311828 | 1.420134 | 77.939045 | < 0.0001 |
| apixaban_median | 0.849150 | 0.801328 | 0.899825 | < 0.0001 | 0.665896 | 36.545373 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.185316 | 1.085276 | 1.294577 | 0.000157 | 0.046975 | 2.578444 | 0.108331 |
| age | 1.058427 | 1.055221 | 1.061642 | <0.0001 | 10.556128 | 579.424472 | <0.0001 |
| with_psychosis | 1.576033 | 1.415061 | 1.755318 | <0.0001 | 0.309084 | 16.965573 | <0.0001 |
| hypertension_times | 0.952581 | 0.935435 | 0.970042 | <0.0001 | 0.470668 | 25.834905 | <0.0001 |
| heart_type_disease_times | 1.011778 | 1.006136 | 1.017451 | <0.0001 | 2.661013 | 146.062658 | <0.0001 |
| neurological_type_disease_times | 1.035829 | 1.024620 | 1.047161 | <0.0001 | 1.049195 | 57.590153 | <0.0001 |
| diabetes_times | 1.008001 | 0.998906 | 1.017178 | 0.084826 | 0.330474 | 18.139676 | <0.0001 |
| hyperlipidemia_times | 1.010311 | 0.989052 | 1.032028 | 0.344431 | 1.404406 | 77.087671 | <0.0001 |
| apixaban_hours_diff_mean | 0.985280 | 0.980215 | 0.990372 | <0.0001 | 0.965568 | 52.999875 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.184171 | 1.084228 | 1.293327 | 0.000172 | 0.048635 | 2.669938 | 0.102263 |
| age | 1.058433 | 1.055228 | 1.061648 | <0.0001 | 10.503094 | 576.593735 | <0.0001 |
| with_psychosis | 1.578641 | 1.417415 | 1.758204 | <0.0001 | 0.322901 | 17.726476 | <0.0001 |
| hypertension_times | 0.952734 | 0.935593 | 0.970188 | <0.0001 | 0.483603 | 26.548623 | <0.0001 |
| heart_type_disease_times | 1.012117 | 1.006500 | 1.017766 | <0.0001 | 2.774778 | 152.328412 | <0.0001 |
| neurological_type_disease_times | 1.035687 | 1.024503 | 1.046994 | <0.0001 | 1.058854 | 58.128442 | <0.0001 |
| diabetes_times | 1.007846 | 0.998773 | 1.017001 | 0.090282 | 0.335138 | 18.398255 | <0.0001 |
| hyperlipidemia_times | 1.010264 | 0.989040 | 1.031942 | 0.345866 | 1.392331 | 76.435513 | <0.0001 |
| apixaban_hours_diff_max | 0.989964 | 0.986516 | 0.993424 | <0.0001 | 1.238286 | 67.978793 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.185413 | 1.085341 | 1.294711 | 0.000157 | 0.044570 | 2.445602 | 0.117858 |
| age | 1.058203 | 1.054995 | 1.061422 | <0.0001 | 10.418754 | 571.690907 | <0.0001 |
| with_psychosis | 1.557378 | 1.398281 | 1.734577 | <0.0001 | 0.269955 | 14.812786 | 0.000119 |
| hypertension_times | 0.952423 | 0.935301 | 0.969859 | <0.0001 | 0.461732 | 25.335840 | <0.0001 |
| heart_type_disease_times | 1.010248 | 1.004560 | 1.015969 | 0.000401 | 2.444300 | 134.122008 | <0.0001 |
| neurological_type_disease_times | 1.036472 | 1.025155 | 1.047913 | <0.0001 | 1.033571 | 56.713435 | <0.0001 |
| diabetes_times | 1.008882 | 0.999802 | 1.018045 | 0.055241 | 0.315142 | 17.292237 | <0.0001 |
| hyperlipidemia_times | 1.009961 | 0.988599 | 1.031784 | 0.363499 | 1.405460 | 77.119434 | <0.0001 |
| apixaban_hours_diff_min | 0.986935 | 0.980448 | 0.993466 | <0.0001 | 0.304012 | 16.681558 | <0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.186285 | 1.086165 | 1.295635 | 0.000146 | 0.046176 | 2.534427 | 0.111390 |
| age | 1.058395 | 1.055189 | 1.061611 | < 0.0001 | 10.541113 | 578.563893 | < 0.0001 |
| with_psychosis | 1.573395 | 1.412687 | 1.752384 | < 0.0001 | 0.301877 | 16.568952 | < 0.0001 |
| hypertension_times | 0.952610 | 0.935462 | 0.970072 | < 0.0001 | 0.468146 | 25.694849 | < 0.0001 |
| heart_type_disease_times | 1.011557 | 1.005904 | 1.017242 | < 0.0001 | 2.615809 | 143.572376 | < 0.0001 |
| neurological_type_disease_times | 1.035959 | 1.024737 | 1.047304 | < 0.0001 | 1.045119 | 57.362856 | < 0.0001 |
| diabetes_times | 1.008100 | 0.998999 | 1.017285 | 0.081249 | 0.328244 | 18.016121 | < 0.0001 |
| hyperlipidemia_times | 1.010173 | 0.988891 | 1.031913 | 0.351510 | 1.407283 | 77.240713 | < 0.0001 |
| apixaban_hours_diff_median | 0.985072 | 0.979725 | 0.990447 | < 0.0001 | 0.842350 | 46.233596 | < 0.0001 |

Rivaroxaban

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.061202 | 0.970890 | 1.159916 | 0.190540 | 0.282444 | 15.651043 | < 0.0001 |
| age | 1.041467 | 1.037864 | 1.045082 | < 0.0001 | 0.972261 | 53.875855 | < 0.0001 |
| with_psychosis | 1.046663 | 0.938439 | 1.167368 | 0.412789 | 0.004533 | 0.251207 | 0.616228 |
| with_hypertension | 1.345359 | 1.167275 | 1.550611 | < 0.0001 | 0.566293 | 31.379961 | < 0.0001 |
| with_heart_type_disease | 1.709394 | 1.530537 | 1.909153 | < 0.0001 | 4.509158 | 249.865671 | < 0.0001 |
| with_neurological_type_disease | 2.948945 | 2.687788 | 3.235478 | < 0.0001 | 15.068774 | 835.004971 | < 0.0001 |
| with_diabetes | 1.174028 | 1.069413 | 1.288877 | 0.000754 | 0.647777 | 35.895230 | < 0.0001 |
| with_hyperlipidemia | 1.508570 | 1.351244 | 1.684213 | < 0.0001 | 4.477060 | 248.087020 | < 0.0001 |
| rivaroxaban | 0.595566 | 0.438309 | 0.809245 | 0.000923 | 0.133388 | 7.391432 | 0.006555 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.184915 | 1.084884 | 1.294169 | 0.000163 | 0.043707 | 2.398055 | 0.121489 |
| age | 1.057809 | 1.054601 | 1.061028 | < 0.0001 | 10.237084 | 561.670677 | < 0.0001 |
| with_psychosis | 1.545860 | 1.387962 | 1.721721 | < 0.0001 | 0.264196 | 14.495469 | 0.000141 |
| hypertension_times | 0.952611 | 0.935524 | 0.970009 | < 0.0001 | 0.470702 | 25.825668 | < 0.0001 |
| heart_type_disease_times | 1.009734 | 1.003991 | 1.015509 | 0.000872 | 2.460922 | 135.021650 | < 0.0001 |
| neurological_type_disease_times | 1.036822 | 1.025455 | 1.048315 | < 0.0001 | 1.035595 | 56.819259 | < 0.0001 |
| diabetes_times | 1.009008 | 0.999921 | 1.018179 | 0.052043 | 0.325887 | 17.880223 | < 0.0001 |
| hyperlipidemia_times | 1.009740 | 0.988255 | 1.031692 | 0.377070 | 1.410187 | 77.371687 | < 0.0001 |
| rivaroxaban_count | 0.959198 | 0.878827 | 1.046919 | 0.350812 | 0.123540 | 6.778189 | 0.009229 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.186662 | 1.086481 | 1.296080 | 0.000143 | 0.041673 | 2.286423 | 0.130513 |
| age | 1.057845 | 1.054640 | 1.061059 | < 0.0001 | 10.310886 | 565.712350 | < 0.0001 |
| with_psychosis | 1.547553 | 1.389482 | 1.723607 | < 0.0001 | 0.263417 | 14.452534 | 0.000144 |
| hypertension_times | 0.952458 | 0.935375 | 0.969852 | < 0.0001 | 0.461158 | 25.301691 | < 0.0001 |
| heart_type_disease_times | 1.009854 | 1.004145 | 1.015596 | 0.000699 | 2.422663 | 132.920731 | < 0.0001 |
| neurological_type_disease_times | 1.036626 | 1.025252 | 1.048127 | < 0.0001 | 1.024562 | 56.213158 | < 0.0001 |
| diabetes_times | 1.008925 | 0.999857 | 1.018074 | 0.053742 | 0.317405 | 17.414619 | < 0.0001 |
| hyperlipidemia_times | 1.010050 | 0.988566 | 1.032001 | 0.361957 | 1.409286 | 77.321230 | < 0.0001 |
| rivaroxaban_mean | 0.983316 | 0.966860 | 1.000052 | 0.050704 | 0.097359 | 5.341665 | 0.020823 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.186691 | 1.086509 | 1.296110 | 0.000143 | 0.041629 | 2.284032 | 0.130715 |
| age | 1.057846 | 1.054641 | 1.061060 | < 0.0001 | 10.313255 | 565.845083 | < 0.0001 |
| with_psychosis | 1.547742 | 1.389654 | 1.723814 | < 0.0001 | 0.264118 | 14.491067 | 0.000141 |
| hypertension_times | 0.952458 | 0.935377 | 0.969852 | < 0.0001 | 0.461118 | 25.299612 | < 0.0001 |
| heart_type_disease_times | 1.009874 | 1.004166 | 1.015614 | 0.000680 | 2.426973 | 133.157837 | < 0.0001 |
| neurological_type_disease_times | 1.036626 | 1.025253 | 1.048125 | < 0.0001 | 1.025105 | 56.243205 | < 0.0001 |
| diabetes_times | 1.008900 | 0.999831 | 1.018050 | 0.054442 | 0.317944 | 17.444232 | < 0.0001 |
| hyperlipidemia_times | 1.010083 | 0.988597 | 1.032036 | 0.360430 | 1.410267 | 77.375415 | < 0.0001 |
| rivaroxaban_max | 0.982979 | 0.966862 | 0.999364 | 0.041812 | 0.106892 | 5.864697 | 0.015449 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.186539 | 1.086367 | 1.295947 | 0.000144 | 0.041794 | 2.293024 | 0.129959 |
| age | 1.057847 | 1.054642 | 1.061061 | < 0.0001 | 10.307951 | 565.547375 | < 0.0001 |
| with_psychosis | 1.547218 | 1.389179 | 1.723236 | < 0.0001 | 0.262363 | 14.394603 | 0.000148 |
| hypertension_times | 0.952464 | 0.935382 | 0.969858 | < 0.0001 | 0.461241 | 25.306061 | < 0.0001 |
| heart_type_disease_times | 1.009821 | 1.004113 | 1.015562 | 0.000727 | 2.415503 | 132.526930 | < 0.0001 |
| neurological_type_disease_times | 1.036644 | 1.025268 | 1.048146 | < 0.0001 | 1.024308 | 56.198819 | < 0.0001 |
| diabetes_times | 1.008968 | 0.999903 | 1.018114 | 0.052507 | 0.316429 | 17.360909 | < 0.0001 |
| hyperlipidemia_times | 1.009971 | 0.988498 | 1.031910 | 0.365547 | 1.407552 | 77.225583 | < 0.0001 |
| rivaroxaban_min | 0.983853 | 0.967006 | 1.000994 | 0.064714 | 0.083698 | 4.592110 | 0.032122 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.186728 | 1.086542 | 1.296152 | 0.000142 | 0.041619 | 2.283450 | 0.130764 |
| age | 1.057845 | 1.054640 | 1.061059 | < 0.0001 | 10.311588 | 565.751822 | < 0.0001 |
| with_psychosis | 1.547626 | 1.389547 | 1.723688 | < 0.0001 | 0.263624 | 14.463885 | 0.000143 |
| hypertension_times | 0.952459 | 0.935376 | 0.969853 | < 0.0001 | 0.461178 | 25.302841 | < 0.0001 |
| heart_type_disease_times | 1.009860 | 1.004151 | 1.015601 | 0.000693 | 2.424117 | 133.000735 | < 0.0001 |
| neurological_type_disease_times | 1.036611 | 1.025236 | 1.048113 | < 0.0001 | 1.024346 | 56.201380 | < 0.0001 |
| diabetes_times | 1.008917 | 0.999849 | 1.018067 | 0.053950 | 0.317612 | 17.425997 | < 0.0001 |
| hyperlipidemia_times | 1.010071 | 0.988584 | 1.032024 | 0.361039 | 1.409599 | 77.338557 | < 0.0001 |
| rivaroxaban_median | 0.983115 | 0.966679 | 0.999831 | 0.047742 | 0.100677 | 5.523700 | 0.018762 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.185134 | 1.085083 | 1.294411 | 0.000160 | 0.043722 | 2.398734 | 0.121436 |
| age | 1.057857 | 1.054650 | 1.061074 | < 0.0001 | 10.285039 | 564.274074 | < 0.0001 |
| with_psychosis | 1.546688 | 1.388660 | 1.722700 | < 0.0001 | 0.259630 | 14.244248 | 0.000161 |
| hypertension_times | 0.952618 | 0.935538 | 0.970010 | < 0.0001 | 0.464166 | 25.465804 | < 0.0001 |
| heart_type_disease_times | 1.009596 | 1.003882 | 1.015341 | 0.000973 | 2.378579 | 130.497377 | < 0.0001 |
| neurological_type_disease_times | 1.036844 | 1.025473 | 1.048341 | < 0.0001 | 1.027513 | 56.373057 | < 0.0001 |
| diabetes_times | 1.009176 | 1.000124 | 1.018309 | 0.046936 | 0.312822 | 17.162563 | < 0.0001 |
| hyperlipidemia_times | 1.009498 | 0.988055 | 1.031405 | 0.388160 | 1.400307 | 76.825878 | < 0.0001 |
| rivaroxaban_hours_diff_mean | 0.997865 | 0.993685 | 1.002063 | 0.318394 | 0.027402 | 1.503370 | 0.220156 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.185462 | 1.085385 | 1.294765 | 0.000156 | 0.043436 | 2.383123 | 0.122655 |
| age | 1.057838 | 1.054631 | 1.061055 | < 0.0001 | 10.286323 | 564.363384 | < 0.0001 |
| with_psychosis | 1.547984 | 1.389844 | 1.724117 | < 0.0001 | 0.265836 | 14.585193 | 0.000134 |
| hypertension_times | 0.952672 | 0.935593 | 0.970063 | < 0.0001 | 0.466457 | 25.592346 | < 0.0001 |
| heart_type_disease_times | 1.009697 | 1.003979 | 1.015448 | 0.000868 | 2.413066 | 132.393867 | < 0.0001 |
| neurological_type_disease_times | 1.036882 | 1.025522 | 1.048367 | < 0.0001 | 1.038257 | 56.964431 | < 0.0001 |
| diabetes_times | 1.009048 | 0.999985 | 1.018193 | 0.050386 | 0.317402 | 17.414370 | < 0.0001 |
| hyperlipidemia_times | 1.009561 | 0.988106 | 1.031482 | 0.385255 | 1.399794 | 76.800263 | < 0.0001 |
| rivaroxaban_hours_diff_max | 0.998107 | 0.995268 | 1.000955 | 0.192443 | 0.092922 | 5.098183 | 0.023953 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.184579 | 1.084574 | 1.293806 | 0.000167 | 0.044285 | 2.429622 | 0.119065 |
| age | 1.057842 | 1.054634 | 1.061060 | < 0.0001 | 10.246111 | 562.131490 | < 0.0001 |
| with_psychosis | 1.543297 | 1.385621 | 1.718915 | < 0.0001 | 0.249979 | 13.714586 | 0.000213 |
| hypertension_times | 0.952563 | 0.935477 | 0.969961 | < 0.0001 | 0.464008 | 25.456840 | < 0.0001 |
| heart_type_disease_times | 1.009443 | 1.003725 | 1.015194 | 0.001184 | 2.346610 | 128.741884 | < 0.0001 |
| neurological_type_disease_times | 1.036911 | 1.025528 | 1.048421 | < 0.0001 | 1.025046 | 56.237035 | < 0.0001 |
| diabetes_times | 1.009339 | 1.000293 | 1.018468 | 0.043004 | 0.308750 | 16.938915 | < 0.0001 |
| hyperlipidemia_times | 1.009315 | 0.987884 | 1.031211 | 0.397155 | 1.398732 | 76.738526 | < 0.0001 |
| rivaroxaban_hours_diff_min | 1.000029 | 0.995333 | 1.004749 | 0.990209 | 0.003495 | 0.191767 | 0.661451 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.184908 | 1.084875 | 1.294164 | 0.000163 | 0.043892 | 2.408059 | 0.120715 |
| age | 1.057857 | 1.054649 | 1.061074 | < 0.0001 | 10.276338 | 563.792059 | < 0.0001 |
| with_psychosis | 1.545708 | 1.387777 | 1.721612 | < 0.0001 | 0.256565 | 14.075932 | 0.000176 |
| hypertension_times | 0.952603 | 0.935521 | 0.969997 | < 0.0001 | 0.463959 | 25.454244 | < 0.0001 |
| heart_type_disease_times | 1.009546 | 1.003831 | 1.015293 | 0.001037 | 2.366998 | 129.860897 | < 0.0001 |
| neurological_type_disease_times | 1.036842 | 1.025465 | 1.048344 | < 0.0001 | 1.025999 | 56.289537 | < 0.0001 |
| diabetes_times | 1.009233 | 1.000184 | 1.018364 | 0.045494 | 0.311410 | 17.084904 | < 0.0001 |
| hyperlipidemia_times | 1.009454 | 0.988016 | 1.031357 | 0.390254 | 1.400081 | 76.812815 | < 0.0001 |
| rivaroxaban_hours_diff_median | 0.998373 | 0.994145 | 1.002620 | 0.452175 | 0.011108 | 0.609409 | 0.435012 |

Dabigatran etexilate

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.060889 | 0.970597 | 1.159581 | 0.192785 | 0.287627 | 15.937397 | < 0.0001 |
| age | 1.041534 | 1.037929 | 1.045152 | < 0.0001 | 0.971057 | 53.806213 | < 0.0001 |
| with_psychosis | 1.040179 | 0.932624 | 1.160137 | 0.479325 | 0.002823 | 0.156443 | 0.692454 |
| with_hypertension | 1.347655 | 1.169344 | 1.553156 | < 0.0001 | 0.564289 | 31.267204 | < 0.0001 |
| with_heart_type_disease | 1.689174 | 1.512605 | 1.886354 | < 0.0001 | 4.344274 | 240.715925 | < 0.0001 |
| with_neurological_type_disease | 2.954261 | 2.692596 | 3.241353 | < 0.0001 | 15.076329 | 835.378288 | < 0.0001 |
| with_diabetes | 1.176677 | 1.071838 | 1.291771 | 0.000633 | 0.656187 | 36.359260 | < 0.0001 |
| with_hyperlipidemia | 1.502928 | 1.346215 | 1.677883 | < 0.0001 | 4.444413 | 246.264624 | < 0.0001 |
| dabigatran etexilate | 0.802621 | 0.526748 | 1.222978 | 0.306202 | 0.028136 | 1.559018 | 0.211812 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.184581 | 1.084576 | 1.293807 | 0.000167 | 0.044300 | 2.430416 | 0.119004 |
| age | 1.057843 | 1.054635 | 1.061061 | < 0.0001 | 10.266833 | 563.270754 | < 0.0001 |
| with_psychosis | 1.543315 | 1.385699 | 1.718858 | < 0.0001 | 0.252285 | 13.841137 | 0.000199 |
| hypertension_times | 0.952562 | 0.935476 | 0.969961 | < 0.0001 | 0.463191 | 25.412115 | < 0.0001 |
| heart_type_disease_times | 1.009439 | 1.003697 | 1.015213 | 0.001246 | 2.297911 | 126.070638 | < 0.0001 |
| neurological_type_disease_times | 1.036914 | 1.025525 | 1.048428 | < 0.0001 | 1.026757 | 56.331108 | < 0.0001 |
| diabetes_times | 1.009342 | 1.000288 | 1.018478 | 0.043105 | 0.305780 | 16.776032 | < 0.0001 |
| hyperlipidemia_times | 1.009310 | 0.987871 | 1.031214 | 0.397563 | 1.396788 | 76.632193 | < 0.0001 |
| dabigatran etexilate_count | 1.001156 | 0.890597 | 1.125440 | 0.984556 | 0.011791 | 0.646889 | 0.421229 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.184648 | 1.084613 | 1.293909 | 0.000167 | 0.044696 | 2.452155 | 0.117367 |
| age | 1.057843 | 1.054635 | 1.061060 | < 0.0001 | 10.250343 | 562.367121 | < 0.0001 |
| with_psychosis | 1.543291 | 1.385680 | 1.718829 | < 0.0001 | 0.252602 | 13.858549 | 0.000197 |
| hypertension_times | 0.952561 | 0.935475 | 0.969958 | < 0.0001 | 0.463945 | 25.453532 | < 0.0001 |
| heart_type_disease_times | 1.009457 | 1.003725 | 1.015221 | 0.001197 | 2.306580 | 126.546472 | < 0.0001 |
| neurological_type_disease_times | 1.036905 | 1.025521 | 1.048415 | < 0.0001 | 1.026056 | 56.292779 | < 0.0001 |
| diabetes_times | 1.009329 | 1.000277 | 1.018463 | 0.043365 | 0.305879 | 16.781523 | < 0.0001 |
| hyperlipidemia_times | 1.009322 | 0.987892 | 1.031217 | 0.396774 | 1.398656 | 76.734831 | < 0.0001 |
| dabigatran etexilate_mean | 0.999914 | 0.996864 | 1.002972 | 0.955774 | 0.015504 | 0.850583 | 0.356390 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.184727 | 1.084687 | 1.293994 | 0.000166 | 0.044636 | 2.448889 | 0.117611 |
| age | 1.057843 | 1.054635 | 1.061060 | < 0.0001 | 10.251166 | 562.411605 | < 0.0001 |
| with_psychosis | 1.543248 | 1.385642 | 1.718780 | < 0.0001 | 0.252580 | 13.857327 | 0.000197 |
| hypertension_times | 0.952557 | 0.935472 | 0.969954 | < 0.0001 | 0.463921 | 25.452180 | < 0.0001 |
| heart_type_disease_times | 1.009472 | 1.003741 | 1.015236 | 0.001173 | 2.308703 | 126.662787 | < 0.0001 |
| neurological_type_disease_times | 1.036898 | 1.025515 | 1.048407 | < 0.0001 | 1.026022 | 56.290808 | < 0.0001 |
| diabetes_times | 1.009317 | 1.000265 | 1.018451 | 0.043631 | 0.306096 | 16.793390 | < 0.0001 |
| hyperlipidemia_times | 1.009330 | 0.987900 | 1.031224 | 0.396357 | 1.398634 | 76.733513 | < 0.0001 |
| dabigatran_etexilate_max | 0.999811 | 0.996803 | 1.002828 | 0.902104 | 0.013158 | 0.721905 | 0.395522 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.184606 | 1.084573 | 1.293866 | 0.000167 | 0.044742 | 2.454674 | 0.117178 |
| age | 1.057843 | 1.054635 | 1.061060 | < 0.0001 | 10.249976 | 562.347305 | < 0.0001 |
| with_psychosis | 1.543316 | 1.385702 | 1.718856 | < 0.0001 | 0.252592 | 13.858008 | 0.000197 |
| hypertension_times | 0.952562 | 0.935476 | 0.969960 | < 0.0001 | 0.463987 | 25.455872 | < 0.0001 |
| heart_type_disease_times | 1.009449 | 1.003717 | 1.015213 | 0.001209 | 2.306471 | 126.540566 | < 0.0001 |
| neurological_type_disease_times | 1.036908 | 1.025525 | 1.048418 | < 0.0001 | 1.026021 | 56.290900 | < 0.0001 |
| diabetes_times | 1.009335 | 1.000283 | 1.018469 | 0.043217 | 0.305877 | 16.781424 | < 0.0001 |
| hyperlipidemia_times | 1.009318 | 0.987887 | 1.031214 | 0.396976 | 1.398724 | 76.738577 | < 0.0001 |
| dabigatran_etexilate_min | 0.999968 | 0.996880 | 1.003066 | 0.983854 | 0.016623 | 0.911989 | 0.339589 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.184609 | 1.084579 | 1.293864 | 0.000167 | 0.044704 | 2.452599 | 0.117333 |
| age | 1.057843 | 1.054635 | 1.061060 | < 0.0001 | 10.249951 | 562.345958 | < 0.0001 |
| with_psychosis | 1.543312 | 1.385698 | 1.718853 | < 0.0001 | 0.252640 | 13.860647 | 0.000197 |
| hypertension_times | 0.952562 | 0.935476 | 0.969960 | < 0.0001 | 0.463955 | 25.454119 | < 0.0001 |
| heart_type_disease_times | 1.009449 | 1.003717 | 1.015215 | 0.001209 | 2.304971 | 126.458263 | < 0.0001 |
| neurological_type_disease_times | 1.036908 | 1.025524 | 1.048418 | < 0.0001 | 1.026086 | 56.294433 | < 0.0001 |
| diabetes_times | 1.009334 | 1.000282 | 1.018469 | 0.043245 | 0.305734 | 16.773574 | < 0.0001 |
| hyperlipidemia_times | 1.009319 | 0.987888 | 1.031214 | 0.396952 | 1.398658 | 76.734990 | < 0.0001 |
| dabigatran_etexilate_median | 0.999964 | 0.996933 | 1.003003 | 0.981216 | 0.016709 | 0.916715 | 0.338341 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.186034 | 1.085895 | 1.295408 | 0.000150 | 0.043525 | 2.387945 | 0.122277 |
| age | 1.057857 | 1.054650 | 1.061074 | <0.0001 | 10.281299 | 564.070303 | <0.0001 |
| with_psychosis | 1.543248 | 1.385651 | 1.718769 | <0.0001 | 0.253294 | 13.896635 | 0.000193 |
| hypertension_times | 0.952513 | 0.935439 | 0.969898 | <0.0001 | 0.463607 | 25.435201 | <0.0001 |
| heart_type_disease_times | 1.009711 | 1.003996 | 1.015460 | 0.000848 | 2.383722 | 130.779875 | <0.0001 |
| neurological_type_disease_times | 1.036820 | 1.025448 | 1.048318 | <0.0001 | 1.024808 | 56.224781 | <0.0001 |
| diabetes_times | 1.009171 | 1.000121 | 1.018303 | 0.047001 | 0.312972 | 17.170788 | <0.0001 |
| hyperlipidemia_times | 1.009338 | 0.987923 | 1.031218 | 0.395613 | 1.397903 | 76.694172 | <0.0001 |
| dabigatran_etexilate_hours_diff_mean | 0.993874 | 0.984014 | 1.003833 | 0.227089 | 0.032211 | 1.767218 | 0.183730 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|-------------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.185721 | 1.085609 | 1.295064 | 0.000154 | 0.043668 | 2.395792 | 0.121665 |
| age | 1.057850 | 1.054643 | 1.061067 | <0.0001 | 10.278093 | 563.894934 | <0.0001 |
| with_psychosis | 1.543534 | 1.385911 | 1.719084 | <0.0001 | 0.253567 | 13.911635 | 0.000192 |
| hypertension_times | 0.952539 | 0.935466 | 0.969923 | <0.0001 | 0.464335 | 25.475175 | <0.0001 |
| heart_type_disease_times | 1.009700 | 1.003984 | 1.015448 | 0.000861 | 2.386345 | 130.923891 | <0.0001 |
| neurological_type_disease_times | 1.036806 | 1.025434 | 1.048304 | <0.0001 | 1.024084 | 56.185108 | <0.0001 |
| diabetes_times | 1.009198 | 1.000154 | 1.018324 | 0.046214 | 0.313129 | 17.179461 | <0.0001 |
| hyperlipidemia_times | 1.009348 | 0.987934 | 1.031226 | 0.395077 | 1.397225 | 76.657034 | <0.0001 |
| dabigatran_etexilate_hours_diff_max | 0.996494 | 0.990207 | 1.002821 | 0.276799 | 0.034064 | 1.868871 | 0.171607 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|-------------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.185899 | 1.085770 | 1.295261 | 0.000152 | 0.043613 | 2.392758 | 0.121901 |
| age | 1.057859 | 1.054651 | 1.061076 | <0.0001 | 10.277533 | 563.859898 | <0.0001 |
| with_psychosis | 1.543078 | 1.385493 | 1.718586 | <0.0001 | 0.252799 | 13.869377 | 0.000196 |
| hypertension_times | 0.952492 | 0.935412 | 0.969884 | <0.0001 | 0.463255 | 25.415698 | <0.0001 |
| heart_type_disease_times | 1.009604 | 1.003887 | 1.015354 | 0.000970 | 2.371772 | 130.123378 | <0.0001 |
| neurological_type_disease_times | 1.036883 | 1.025507 | 1.048384 | <0.0001 | 1.025468 | 56.260613 | <0.0001 |
| diabetes_times | 1.009222 | 1.000168 | 1.018358 | 0.045888 | 0.311607 | 17.095819 | <0.0001 |
| hyperlipidemia_times | 1.009310 | 0.987886 | 1.031199 | 0.397243 | 1.398270 | 76.713760 | <0.0001 |
| dabigatran_etexilate_hours_diff_min | 0.992798 | 0.979139 | 1.006648 | 0.306517 | 0.019176 | 1.052036 | 0.305041 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.186147 | 1.085998 | 1.295531 | 0.000149 | 0.043463 | 2.384573 | 0.122541 |
| age | 1.057859 | 1.054652 | 1.061076 | < 0.0001 | 10.282703 | 564.148644 | < 0.0001 |
| with_psychosis | 1.543099 | 1.385516 | 1.718605 | < 0.0001 | 0.253226 | 13.892940 | 0.000194 |
| hypertension_times | 0.952512 | 0.935439 | 0.969898 | < 0.0001 | 0.463550 | 25.432119 | < 0.0001 |
| heart_type_disease_times | 1.009723 | 1.004008 | 1.015471 | 0.000834 | 2.385195 | 130.860977 | < 0.0001 |
| neurological_type_disease_times | 1.036816 | 1.025444 | 1.048315 | < 0.0001 | 1.024639 | 56.215640 | < 0.0001 |
| diabetes_times | 1.009150 | 1.000096 | 1.018285 | 0.047600 | 0.313092 | 17.177448 | < 0.0001 |
| hyperlipidemia_times | 1.009339 | 0.987923 | 1.031220 | 0.395587 | 1.398012 | 76.700302 | < 0.0001 |
| dabigatran etexilate_hours_diff_median | 0.992745 | 0.981888 | 1.003722 | 0.194340 | 0.036799 | 2.018922 | 0.155352 |

Cilostazol

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.059966 | 0.969709 | 1.158624 | 0.199651 | 0.288353 | 15.978559 | < 0.0001 |
| age | 1.041540 | 1.037934 | 1.045158 | < 0.0001 | 0.967218 | 53.596656 | < 0.0001 |
| with_psychosis | 1.040749 | 0.933128 | 1.160781 | 0.473268 | 0.002026 | 0.112271 | 0.737574 |
| with_hypertension | 1.346596 | 1.168404 | 1.551964 | < 0.0001 | 0.562915 | 31.192940 | < 0.0001 |
| with_heart_type_disease | 1.683846 | 1.508011 | 1.880183 | < 0.0001 | 4.383416 | 242.899178 | < 0.0001 |
| with_neurological_type_disease | 2.953553 | 2.691908 | 3.240630 | < 0.0001 | 15.063514 | 834.717786 | < 0.0001 |
| with_diabetes | 1.177104 | 1.072133 | 1.292353 | 0.000623 | 0.640761 | 35.506602 | < 0.0001 |
| with_hyperlipidemia | 1.502049 | 1.345403 | 1.676934 | < 0.0001 | 4.424313 | 245.165446 | < 0.0001 |
| cilostazol | 1.012357 | 0.597448 | 1.715408 | 0.963593 | 0.143353 | 7.943659 | 0.004826 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.184981 | 1.084931 | 1.294257 | 0.000162 | 0.043332 | 2.377698 | 0.123082 |
| age | 1.057832 | 1.054623 | 1.061050 | < 0.0001 | 10.254740 | 562.688825 | < 0.0001 |
| with_psychosis | 1.541700 | 1.384192 | 1.717132 | < 0.0001 | 0.247289 | 13.568994 | 0.000230 |
| hypertension_times | 0.953018 | 0.935917 | 0.970432 | < 0.0001 | 0.483196 | 26.513483 | < 0.0001 |
| heart_type_disease_times | 1.009413 | 1.003655 | 1.015203 | 0.001326 | 2.304941 | 126.474640 | < 0.0001 |
| neurological_type_disease_times | 1.037253 | 1.025846 | 1.048787 | < 0.0001 | 1.029524 | 56.491085 | < 0.0001 |
| diabetes_times | 1.008076 | 0.998791 | 1.017446 | 0.088417 | 0.365838 | 20.073925 | < 0.0001 |
| hyperlipidemia_times | 1.009457 | 0.987896 | 1.031489 | 0.392835 | 1.384328 | 75.959574 | < 0.0001 |
| cilostazol_count | 1.060366 | 0.990312 | 1.135376 | 0.092800 | 0.295707 | 16.225789 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.183886 | 1.083914 | 1.293080 | 0.000177 | 0.044889 | 2.462804 | 0.116573 |
| age | 1.057818 | 1.054609 | 1.061036 | < 0.0001 | 10.228557 | 561.187936 | < 0.0001 |
| with_psychosis | 1.542404 | 1.384867 | 1.717862 | < 0.0001 | 0.248020 | 13.607568 | 0.000225 |
| hypertension_times | 0.952629 | 0.935541 | 0.970028 | < 0.0001 | 0.467708 | 25.660698 | < 0.0001 |
| heart_type_disease_times | 1.009438 | 1.003715 | 1.015195 | 0.001203 | 2.342235 | 128.506320 | < 0.0001 |
| neurological_type_disease_times | 1.037018 | 1.025629 | 1.048533 | < 0.0001 | 1.028751 | 56.442261 | < 0.0001 |
| diabetes_times | 1.009114 | 1.000036 | 1.018275 | 0.049094 | 0.320541 | 17.586435 | < 0.0001 |
| hyperlipidemia_times | 1.009242 | 0.987779 | 1.031171 | 0.401578 | 1.385295 | 76.003975 | < 0.0001 |
| cilostazol_mean | 1.002010 | 0.995735 | 1.008326 | 0.530954 | 0.071585 | 3.927480 | 0.047506 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.183903 | 1.083930 | 1.293096 | 0.000177 | 0.044853 | 2.460838 | 0.116719 |
| age | 1.057818 | 1.054609 | 1.061036 | < 0.0001 | 10.228941 | 561.209355 | < 0.0001 |
| with_psychosis | 1.542442 | 1.384902 | 1.717902 | < 0.0001 | 0.248130 | 13.613642 | 0.000225 |
| hypertension_times | 0.952632 | 0.935545 | 0.970031 | < 0.0001 | 0.467882 | 25.670266 | < 0.0001 |
| heart_type_disease_times | 1.009441 | 1.003717 | 1.015197 | 0.001200 | 2.342552 | 128.523772 | < 0.0001 |
| neurological_type_disease_times | 1.037018 | 1.025629 | 1.048534 | < 0.0001 | 1.028753 | 56.442378 | < 0.0001 |
| diabetes_times | 1.009103 | 1.000024 | 1.018264 | 0.049403 | 0.321267 | 17.626292 | < 0.0001 |
| hyperlipidemia_times | 1.009243 | 0.987780 | 1.031173 | 0.401526 | 1.384795 | 75.976554 | < 0.0001 |
| cilostazol_max | 1.001953 | 0.995828 | 1.008116 | 0.532788 | 0.072789 | 3.993568 | 0.045677 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.183849 | 1.083879 | 1.293040 | 0.000177 | 0.044907 | 2.463816 | 0.116498 |
| age | 1.057817 | 1.054608 | 1.061036 | < 0.0001 | 10.229249 | 561.225533 | < 0.0001 |
| with_psychosis | 1.542365 | 1.384834 | 1.717817 | < 0.0001 | 0.248051 | 13.609287 | 0.000225 |
| hypertension_times | 0.952616 | 0.935526 | 0.970017 | < 0.0001 | 0.467187 | 25.632105 | < 0.0001 |
| heart_type_disease_times | 1.009434 | 1.003710 | 1.015190 | 0.001211 | 2.342188 | 128.503635 | < 0.0001 |
| neurological_type_disease_times | 1.037022 | 1.025634 | 1.048537 | < 0.0001 | 1.028800 | 56.444893 | < 0.0001 |
| diabetes_times | 1.009134 | 1.000057 | 1.018293 | 0.048574 | 0.319297 | 17.518170 | < 0.0001 |
| hyperlipidemia_times | 1.009230 | 0.987768 | 1.031159 | 0.402176 | 1.385435 | 76.011588 | < 0.0001 |
| cilostazol_min | 1.002146 | 0.995774 | 1.008558 | 0.510088 | 0.070225 | 3.852881 | 0.049663 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.183948 | 1.083969 | 1.293148 | 0.000176 | 0.044871 | 2.461831 | 0.116646 |
| age | 1.057820 | 1.054611 | 1.061039 | < 0.0001 | 10.230134 | 561.272337 | < 0.0001 |
| with_psychosis | 1.542505 | 1.384958 | 1.717975 | < 0.0001 | 0.248217 | 13.618328 | 0.000224 |
| hypertension_times | 0.952620 | 0.935533 | 0.970019 | < 0.0001 | 0.467431 | 25.645437 | < 0.0001 |
| heart_type_disease_times | 1.009440 | 1.003718 | 1.015195 | 0.001198 | 2.343231 | 128.560433 | < 0.0001 |
| neurological_type_disease_times | 1.037004 | 1.025616 | 1.048519 | < 0.0001 | 1.028515 | 56.429054 | < 0.0001 |
| diabetes_times | 1.009142 | 1.000065 | 1.018302 | 0.048372 | 0.319702 | 17.540326 | < 0.0001 |
| hyperlipidemia_times | 1.009251 | 0.987792 | 1.031176 | 0.401042 | 1.386017 | 76.043267 | < 0.0001 |
| cilostazol_median | 1.001802 | 0.995477 | 1.008167 | 0.577471 | 0.064158 | 3.519990 | 0.060636 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.183688 | 1.083749 | 1.292843 | 0.000179 | 0.044268 | 2.428820 | 0.119126 |
| age | 1.057799 | 1.054591 | 1.061017 | < 0.0001 | 10.222241 | 560.860172 | < 0.0001 |
| with_psychosis | 1.541374 | 1.383929 | 1.716731 | < 0.0001 | 0.245887 | 13.491022 | 0.000240 |
| hypertension_times | 0.952788 | 0.935713 | 0.970174 | < 0.0001 | 0.472147 | 25.905102 | < 0.0001 |
| heart_type_disease_times | 1.009433 | 1.003702 | 1.015198 | 0.001231 | 2.338879 | 128.326462 | < 0.0001 |
| neurological_type_disease_times | 1.037082 | 1.025686 | 1.048604 | < 0.0001 | 1.025029 | 56.239929 | < 0.0001 |
| diabetes_times | 1.008721 | 0.999640 | 1.017886 | 0.059856 | 0.329854 | 18.097994 | < 0.0001 |
| hyperlipidemia_times | 1.009356 | 0.987860 | 1.031319 | 0.396506 | 1.392249 | 76.388038 | < 0.0001 |
| cilostazol_hours_diff_mean | 1.003134 | 0.999130 | 1.007154 | 0.125184 | 0.137114 | 7.522988 | 0.006093 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.184265 | 1.084278 | 1.293474 | 0.000171 | 0.044172 | 2.423449 | 0.119534 |
| age | 1.057829 | 1.054621 | 1.061047 | < 0.0001 | 10.247199 | 562.201318 | < 0.0001 |
| with_psychosis | 1.542525 | 1.384954 | 1.718024 | < 0.0001 | 0.249383 | 13.682148 | 0.000217 |
| hypertension_times | 0.952687 | 0.935602 | 0.970085 | < 0.0001 | 0.470160 | 25.794795 | < 0.0001 |
| heart_type_disease_times | 1.009458 | 1.003736 | 1.015213 | 0.001172 | 2.347649 | 128.801169 | < 0.0001 |
| neurological_type_disease_times | 1.036965 | 1.025574 | 1.048482 | < 0.0001 | 1.022729 | 56.110918 | < 0.0001 |
| diabetes_times | 1.009051 | 0.999933 | 1.018251 | 0.051720 | 0.324815 | 17.820623 | < 0.0001 |
| hyperlipidemia_times | 1.009328 | 0.987869 | 1.031252 | 0.397107 | 1.394793 | 76.523787 | < 0.0001 |
| cilostazol_hours_diff_max | 1.000641 | 0.998202 | 1.003087 | 0.606652 | 0.038871 | 2.132636 | 0.144196 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.183875 | 1.083928 | 1.293038 | 0.000176 | 0.044458 | 2.439377 | 0.118326 |
| age | 1.057795 | 1.054587 | 1.061013 | < 0.0001 | 10.207037 | 560.057670 | < 0.0001 |
| with_psychosis | 1.540858 | 1.383458 | 1.716166 | < 0.0001 | 0.244373 | 13.408670 | 0.000251 |
| hypertension_times | 0.952695 | 0.935613 | 0.970089 | < 0.0001 | 0.469502 | 25.761436 | < 0.0001 |
| heart_type_disease_times | 1.009404 | 1.003676 | 1.015165 | 0.001265 | 2.344232 | 128.627469 | < 0.0001 |
| neurological_type_disease_times | 1.037050 | 1.025663 | 1.048563 | < 0.0001 | 1.027363 | 56.371135 | < 0.0001 |
| diabetes_times | 1.009016 | 0.999939 | 1.018175 | 0.051566 | 0.321263 | 17.627615 | < 0.0001 |
| hyperlipidemia_times | 1.009327 | 0.987859 | 1.031262 | 0.397351 | 1.392517 | 76.407063 | < 0.0001 |
| cilostazol_hours_diff_min | 1.004771 | 1.001149 | 1.008405 | 0.009782 | 0.247884 | 13.601343 | 0.000226 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.183683 | 1.083746 | 1.292837 | 0.000179 | 0.044263 | 2.428614 | 0.119141 |
| age | 1.057797 | 1.054588 | 1.061015 | < 0.0001 | 10.218141 | 560.644561 | < 0.0001 |
| with_psychosis | 1.541542 | 1.384099 | 1.716893 | < 0.0001 | 0.245012 | 13.443190 | 0.000246 |
| hypertension_times | 0.952728 | 0.935648 | 0.970119 | < 0.0001 | 0.471590 | 25.875013 | < 0.0001 |
| heart_type_disease_times | 1.009391 | 1.003656 | 1.015158 | 0.001303 | 2.333553 | 128.036385 | < 0.0001 |
| neurological_type_disease_times | 1.037113 | 1.025723 | 1.048631 | < 0.0001 | 1.027740 | 56.389619 | < 0.0001 |
| diabetes_times | 1.008804 | 0.999727 | 1.017963 | 0.057330 | 0.327814 | 17.986343 | < 0.0001 |
| hyperlipidemia_times | 1.009361 | 0.987868 | 1.031323 | 0.396188 | 1.392391 | 76.397129 | < 0.0001 |
| cilostazol_hours_diff_median | 1.003664 | 0.999722 | 1.007622 | 0.068513 | 0.169674 | 9.309619 | 0.002280 |

Enoxaparin

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.035116 | 0.946851 | 1.131610 | 0.447865 | 0.304330 | 16.866529 | < 0.0001 |
| age | 1.041584 | 1.037994 | 1.045187 | < 0.0001 | 1.032510 | 57.223593 | < 0.0001 |
| with_psychosis | 1.073243 | 0.962189 | 1.197115 | 0.204679 | 0.009238 | 0.511988 | 0.474281 |
| with_hypertension | 1.370059 | 1.188421 | 1.579458 | < 0.0001 | 0.584049 | 32.369086 | < 0.0001 |
| with_heart_type_disease | 1.707565 | 1.528864 | 1.907155 | < 0.0001 | 4.389768 | 243.288939 | < 0.0001 |
| with_neurological_type_disease | 3.008221 | 2.741832 | 3.300491 | < 0.0001 | 15.144291 | 839.324177 | < 0.0001 |
| with_diabetes | 1.167912 | 1.063837 | 1.282169 | 0.001116 | 0.641727 | 35.565665 | < 0.0001 |
| with_hyperlipidemia | 1.512827 | 1.354924 | 1.689133 | < 0.0001 | 4.483888 | 248.505232 | < 0.0001 |
| enoxaparin | 0.529796 | 0.461430 | 0.608290 | < 0.0001 | 0.444407 | 24.629826 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.170464 | 1.071561 | 1.278496 | 0.000475 | 0.049243 | 2.702666 | 0.100184 |
| age | 1.057873 | 1.054676 | 1.061079 | < 0.0001 | 10.317341 | 566.257203 | < 0.0001 |
| with_psychosis | 1.556903 | 1.397672 | 1.734273 | < 0.0001 | 0.300338 | 16.483738 | < 0.0001 |
| hypertension_times | 0.953972 | 0.936955 | 0.971298 | < 0.0001 | 0.553958 | 30.403443 | < 0.0001 |
| heart_type_disease_times | 1.010275 | 1.004632 | 1.015951 | 0.000348 | 2.369290 | 130.036172 | < 0.0001 |
| neurological_type_disease_times | 1.045653 | 1.033042 | 1.058418 | < 0.0001 | 1.153054 | 63.284240 | < 0.0001 |
| diabetes_times | 1.008394 | 0.999263 | 1.017609 | 0.071682 | 0.353896 | 19.423236 | < 0.0001 |
| hyperlipidemia_times | 1.012170 | 0.990855 | 1.033943 | 0.265315 | 1.471463 | 80.759789 | < 0.0001 |
| enoxaparin_count | 0.847390 | 0.799750 | 0.897869 | < 0.0001 | 0.757148 | 41.555319 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.180066 | 1.080404 | 1.288922 | 0.000235 | 0.044820 | 2.459438 | 0.116824 |
| age | 1.057823 | 1.054629 | 1.061025 | < 0.0001 | 10.384676 | 569.848891 | < 0.0001 |
| with_psychosis | 1.557589 | 1.398411 | 1.734885 | < 0.0001 | 0.280241 | 15.377951 | < 0.0001 |
| hypertension_times | 0.954234 | 0.937211 | 0.971567 | < 0.0001 | 0.502511 | 27.574771 | < 0.0001 |
| heart_type_disease_times | 1.010083 | 1.004401 | 1.015798 | 0.000491 | 2.410073 | 132.250380 | < 0.0001 |
| neurological_type_disease_times | 1.039631 | 1.028044 | 1.051349 | < 0.0001 | 1.060856 | 58.213434 | < 0.0001 |
| diabetes_times | 1.008702 | 0.999538 | 1.017949 | 0.062772 | 0.328849 | 18.045260 | < 0.0001 |
| hyperlipidemia_times | 1.011103 | 0.989647 | 1.033025 | 0.312987 | 1.446279 | 79.363127 | < 0.0001 |
| enoxaparin_mean | 0.994218 | 0.991942 | 0.996499 | < 0.0001 | 0.399872 | 21.942597 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.180008 | 1.080354 | 1.288854 | 0.000236 | 0.045022 | 2.470552 | 0.116000 |
| age | 1.057819 | 1.054625 | 1.061022 | < 0.0001 | 10.379352 | 569.556475 | < 0.0001 |
| with_psychosis | 1.556235 | 1.397182 | 1.733394 | < 0.0001 | 0.280869 | 15.412376 | < 0.0001 |
| hypertension_times | 0.954052 | 0.937041 | 0.971373 | < 0.0001 | 0.504137 | 27.664035 | < 0.0001 |
| heart_type_disease_times | 1.010197 | 1.004518 | 1.015907 | 0.000420 | 2.413961 | 132.463674 | < 0.0001 |
| neurological_type_disease_times | 1.040533 | 1.028811 | 1.052388 | < 0.0001 | 1.068797 | 58.649158 | < 0.0001 |
| diabetes_times | 1.008709 | 0.999535 | 1.017967 | 0.062856 | 0.329123 | 18.060268 | < 0.0001 |
| hyperlipidemia_times | 1.011305 | 0.989848 | 1.033227 | 0.304216 | 1.448865 | 79.505032 | < 0.0001 |
| enoxaparin_max | 0.994651 | 0.992536 | 0.996771 | < 0.0001 | 0.399022 | 21.895935 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.180634 | 1.080921 | 1.289544 | 0.000226 | 0.044602 | 2.447424 | 0.117721 |
| age | 1.057834 | 1.054641 | 1.061037 | < 0.0001 | 10.384654 | 569.837653 | < 0.0001 |
| with_psychosis | 1.558918 | 1.399623 | 1.736344 | < 0.0001 | 0.277604 | 15.232979 | < 0.0001 |
| hypertension_times | 0.954504 | 0.937419 | 0.971899 | < 0.0001 | 0.498256 | 27.340821 | < 0.0001 |
| heart_type_disease_times | 1.009876 | 1.004182 | 1.015602 | 0.000658 | 2.402052 | 131.807944 | < 0.0001 |
| neurological_type_disease_times | 1.037676 | 1.026369 | 1.049107 | < 0.0001 | 1.049435 | 57.585687 | < 0.0001 |
| diabetes_times | 1.008672 | 0.999519 | 1.017908 | 0.063365 | 0.327595 | 17.976142 | < 0.0001 |
| hyperlipidemia_times | 1.010758 | 0.989261 | 1.032723 | 0.329258 | 1.440210 | 79.028730 | < 0.0001 |
| enoxaparin_min | 0.994102 | 0.991686 | 0.996523 | < 0.0001 | 0.365480 | 20.054991 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.180005 | 1.080349 | 1.288853 | 0.000236 | 0.044770 | 2.456697 | 0.117028 |
| age | 1.057820 | 1.054627 | 1.061023 | < 0.0001 | 10.385187 | 569.880132 | < 0.0001 |
| with_psychosis | 1.557338 | 1.398185 | 1.734606 | < 0.0001 | 0.280754 | 15.406214 | < 0.0001 |
| hypertension_times | 0.954148 | 0.937144 | 0.971461 | < 0.0001 | 0.502838 | 27.592909 | < 0.0001 |
| heart_type_disease_times | 1.010105 | 1.004424 | 1.015817 | 0.000475 | 2.410615 | 132.280873 | < 0.0001 |
| neurological_type_disease_times | 1.039966 | 1.028310 | 1.051753 | < 0.0001 | 1.061531 | 58.250778 | < 0.0001 |
| diabetes_times | 1.008744 | 0.999583 | 1.017989 | 0.061428 | 0.328570 | 18.030032 | < 0.0001 |
| hyperlipidemia_times | 1.011054 | 0.989618 | 1.032955 | 0.314661 | 1.446628 | 79.382740 | < 0.0001 |
| enoxaparin_median | 0.994183 | 0.991912 | 0.996460 | < 0.0001 | 0.411034 | 22.555219 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.163499 | 1.065176 | 1.270898 | 0.000775 | 0.050930 | 2.795182 | 0.094551 |
| age | 1.058053 | 1.054857 | 1.061259 | < 0.0001 | 10.430021 | 572.433152 | < 0.0001 |
| with_psychosis | 1.582330 | 1.420649 | 1.762413 | < 0.0001 | 0.307486 | 16.875824 | < 0.0001 |
| hypertension_times | 0.955230 | 0.938079 | 0.972695 | < 0.0001 | 0.504836 | 27.707025 | < 0.0001 |
| heart_type_disease_times | 1.008861 | 1.003164 | 1.014590 | 0.002262 | 2.283716 | 125.337687 | < 0.0001 |
| neurological_type_disease_times | 1.039281 | 1.027823 | 1.050866 | < 0.0001 | 1.075443 | 59.023788 | < 0.0001 |
| diabetes_times | 1.008767 | 0.999582 | 1.018037 | 0.061417 | 0.319751 | 17.548947 | < 0.0001 |
| hyperlipidemia_times | 1.011430 | 0.989898 | 1.033431 | 0.300582 | 1.446331 | 79.379316 | < 0.0001 |
| enoxaparin_hours_diff_mean | 0.992010 | 0.989730 | 0.994295 | < 0.0001 | 0.728488 | 39.981788 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.166176 | 1.067625 | 1.273824 | 0.000644 | 0.046699 | 2.562677 | 0.109416 |
| age | 1.057945 | 1.054748 | 1.061150 | < 0.0001 | 10.329507 | 566.841324 | < 0.0001 |
| with_psychosis | 1.581925 | 1.420299 | 1.761943 | < 0.0001 | 0.292422 | 16.046908 | < 0.0001 |
| hypertension_times | 0.955219 | 0.938022 | 0.972730 | < 0.0001 | 0.504017 | 27.658392 | < 0.0001 |
| heart_type_disease_times | 1.009186 | 1.003503 | 1.014900 | 0.001504 | 2.328053 | 127.754066 | < 0.0001 |
| neurological_type_disease_times | 1.040766 | 1.029187 | 1.052475 | < 0.0001 | 1.065353 | 58.462258 | < 0.0001 |
| diabetes_times | 1.008653 | 0.999451 | 1.017940 | 0.065406 | 0.320798 | 17.604102 | < 0.0001 |
| hyperlipidemia_times | 1.011411 | 0.989792 | 1.033502 | 0.303380 | 1.415855 | 77.696347 | < 0.0001 |
| enoxaparin_hours_diff_max | 0.994522 | 0.992857 | 0.996190 | < 0.0001 | 0.468278 | 25.697174 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.168966 | 1.070200 | 1.276847 | 0.000528 | 0.049542 | 2.718538 | 0.099192 |
| age | 1.058088 | 1.054888 | 1.061298 | < 0.0001 | 10.378284 | 569.487245 | < 0.0001 |
| with_psychosis | 1.566870 | 1.406770 | 1.745190 | < 0.0001 | 0.276428 | 15.168406 | < 0.0001 |
| hypertension_times | 0.954375 | 0.937272 | 0.971790 | < 0.0001 | 0.479644 | 26.319484 | < 0.0001 |
| heart_type_disease_times | 1.008705 | 1.002986 | 1.014458 | 0.002812 | 2.301606 | 126.295948 | < 0.0001 |
| neurological_type_disease_times | 1.036952 | 1.025600 | 1.048429 | < 0.0001 | 1.038326 | 56.976047 | < 0.0001 |
| diabetes_times | 1.009086 | 0.999976 | 1.018280 | 0.050615 | 0.311940 | 17.117048 | < 0.0001 |
| hyperlipidemia_times | 1.010393 | 0.988997 | 1.032251 | 0.343734 | 1.424120 | 78.145671 | < 0.0001 |
| enoxaparin_hours_diff_min | 0.992551 | 0.989912 | 0.995196 | < 0.0001 | 0.362516 | 19.892345 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|-----------|------------|----------|
| gender | 1.163073 | 1.064786 | 1.270433 | 0.000798 | 0.051375 | 2.819597 | 0.093123 |
| age | 1.058086 | 1.054890 | 1.061292 | < 0.0001 | 10.430668 | 572.459112 | < 0.0001 |
| with_psychosis | 1.580956 | 1.419427 | 1.760867 | < 0.0001 | 0.301707 | 16.558380 | < 0.0001 |
| hypertension_times | 0.955207 | 0.938030 | 0.972699 | < 0.0001 | 0.501086 | 27.500758 | < 0.0001 |
| heart_type_disease_times | 1.008764 | 1.003058 | 1.014502 | 0.002568 | 2.281193 | 125.197152 | < 0.0001 |
| neurological_type_disease_times | 1.038385 | 1.027016 | 1.049881 | < 0.0001 | 1.068381 | 58.635209 | < 0.0001 |
| diabetes_times | 1.008805 | 0.999612 | 1.018081 | 0.060523 | 0.318513 | 17.480745 | < 0.0001 |
| hyperlipidemia_times | 1.011425 | 0.989878 | 1.033440 | 0.301135 | 1.445173 | 79.314405 | < 0.0001 |
| enoxaparin_hours_diff_median | 0.991747 | 0.989391 | 0.994108 | < 0.0001 | 0.695847 | 38.189676 | < 0.0001 |

(資料來源：https://mimic-iv-drug-data-analysis-0--introduction-uwuting.streamlit.app/Cox_PH_Model)

附錄五

Cox 模型結果，全面呈現八種藥物(Aspirin、Warfarin、Clopidogrel、Apixaban、Rivaroxaban、Dabigatran etexilate、Cilostazol、Enoxaparin)對出血性中風患者的風險影響，關於各項藥物，預測出血型中風對照組診斷前三診斷排除的風險比詳細結果。

Aspirin

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|----------|-------------|----------|
| gender | 1.568474 | 1.349944 | 1.822381 | < 0.0001 | 0.065004 | 10.183475 | 0.001417 |
| age | 1.039117 | 1.033412 | 1.044853 | < 0.0001 | 0.212940 | 33.359061 | < 0.0001 |
| with_psychosis | 0.857933 | 0.717655 | 1.025632 | 0.092545 | 0.015948 | 2.498365 | 0.113967 |
| with_hypertension | 1.481622 | 1.192446 | 1.840925 | 0.000387 | 0.166779 | 26.127453 | < 0.0001 |
| with_heart_type_disease | 1.382880 | 1.151413 | 1.660879 | 0.000523 | 0.266946 | 41.819574 | < 0.0001 |
| with_neurological_type_disease | 10.015906 | 8.533143 | 11.756321 | < 0.0001 | 9.413963 | 1474.785054 | < 0.0001 |
| with_diabetes | 0.981102 | 0.830587 | 1.158892 | 0.822344 | 0.001482 | 0.232091 | 0.629979 |
| with_hyperlipidemia | 0.918765 | 0.772982 | 1.092043 | 0.336491 | 0.040698 | 6.375657 | 0.011571 |
| aspirin | 0.545719 | 0.461830 | 0.644847 | < 0.0001 | 0.186408 | 29.202499 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.540844 | 1.326950 | 1.789215 | < 0.0001 | 0.078900 | 12.247668 | 0.000466 |
| age | 1.051008 | 1.045817 | 1.056224 | < 0.0001 | 1.354567 | 210.271091 | < 0.0001 |
| with_psychosis | 1.648219 | 1.377086 | 1.972735 | < 0.0001 | 0.020889 | 3.242603 | 0.071749 |
| hypertension_times | 0.959451 | 0.936074 | 0.983413 | 0.001005 | 0.021589 | 3.351218 | 0.067158 |
| heart_type_disease_times | 1.006791 | 0.993964 | 1.019783 | 0.300869 | 0.206711 | 32.088032 | < 0.0001 |
| neurological_type_disease_times | 1.066926 | 1.053652 | 1.080367 | < 0.0001 | 2.948508 | 457.700498 | < 0.0001 |
| diabetes_times | 1.023012 | 1.008334 | 1.037903 | 0.002032 | 0.010137 | 1.573608 | 0.209686 |
| hyperlipidemia_times | 0.957568 | 0.921253 | 0.995315 | 0.027947 | 0.012481 | 1.937365 | 0.163958 |
| aspirin_count | 0.923631 | 0.886398 | 0.962427 | 0.000154 | 0.359375 | 55.786162 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.507751 | 1.298432 | 1.750815 | < 0.0001 | 0.056890 | 8.826685 | 0.002969 |
| age | 1.050822 | 1.045580 | 1.056091 | < 0.0001 | 1.182046 | 183.397341 | < 0.0001 |
| with_psychosis | 1.621497 | 1.354239 | 1.941497 | < 0.0001 | 0.024303 | 3.770650 | 0.052162 |
| hypertension_times | 0.949499 | 0.926545 | 0.973021 | < 0.0001 | 0.010152 | 1.575089 | 0.209472 |
| heart_type_disease_times | 0.998028 | 0.986396 | 1.009797 | 0.741391 | 0.036225 | 5.620420 | 0.017754 |
| neurological_type_disease_times | 1.076865 | 1.064411 | 1.089464 | < 0.0001 | 2.923717 | 453.622043 | < 0.0001 |
| diabetes_times | 1.018558 | 1.004726 | 1.032580 | 0.008394 | 0.000177 | 0.027386 | 0.868561 |
| hyperlipidemia_times | 0.953097 | 0.918090 | 0.989439 | 0.011869 | 0.000391 | 0.060721 | 0.805361 |
| aspirin_mean | 0.999776 | 0.998962 | 1.000590 | 0.589038 | 0.002242 | 0.347888 | 0.555312 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.523796 | 1.312213 | 1.769494 | < 0.0001 | 0.061095 | 9.479084 | 0.002079 |
| age | 1.051274 | 1.046054 | 1.056520 | < 0.0001 | 1.235239 | 191.650678 | < 0.0001 |
| with_psychosis | 1.617122 | 1.350772 | 1.935991 | < 0.0001 | 0.023599 | 3.661489 | 0.055686 |
| hypertension_times | 0.950726 | 0.927735 | 0.974286 | < 0.0001 | 0.010436 | 1.619200 | 0.203206 |
| heart_type_disease_times | 0.999927 | 0.988204 | 1.011790 | 0.990375 | 0.042176 | 6.543759 | 0.010527 |
| neurological_type_disease_times | 1.075064 | 1.062568 | 1.087707 | < 0.0001 | 2.921729 | 453.314019 | < 0.0001 |
| diabetes_times | 1.018235 | 1.004264 | 1.032400 | 0.010361 | 0.000136 | 0.021132 | 0.884421 |
| hyperlipidemia_times | 0.955143 | 0.920038 | 0.991588 | 0.016302 | 0.000676 | 0.104864 | 0.746070 |
| aspirin_max | 0.999345 | 0.998687 | 1.000003 | 0.051003 | 0.002841 | 0.440770 | 0.506752 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.500693 | 1.292555 | 1.742346 | < 0.0001 | 0.056823 | 8.816311 | 0.002986 |
| age | 1.050561 | 1.045320 | 1.055828 | < 0.0001 | 1.185478 | 183.930097 | < 0.0001 |
| with_psychosis | 1.623545 | 1.355904 | 1.944015 | < 0.0001 | 0.024262 | 3.764251 | 0.052362 |
| hypertension_times | 0.949137 | 0.926203 | 0.972638 | < 0.0001 | 0.010190 | 1.580946 | 0.208627 |
| heart_type_disease_times | 0.997598 | 0.986008 | 1.009325 | 0.686761 | 0.037549 | 5.825877 | 0.015794 |
| neurological_type_disease_times | 1.077395 | 1.064988 | 1.089946 | < 0.0001 | 2.923408 | 453.574462 | < 0.0001 |
| diabetes_times | 1.018641 | 1.004829 | 1.032642 | 0.008012 | 0.000165 | 0.025594 | 0.872897 |
| hyperlipidemia_times | 0.952492 | 0.917493 | 0.988825 | 0.010825 | 0.000410 | 0.063581 | 0.800924 |
| aspirin_min | 1.000071 | 0.999183 | 1.000960 | 0.875510 | 0.002756 | 0.427622 | 0.513160 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|-----------|----------|------------|----------|
| gender | 1.500903 | 1.292659 | 1.742696 | < 0.0001 | 0.055147 | 8.556208 | 0.003444 |
| age | 1.050572 | 1.045331 | 1.055840 | < 0.0001 | 1.164536 | 180.682500 | < 0.0001 |
| with_psychosis | 1.623609 | 1.355926 | 1.944136 | < 0.0001 | 0.024589 | 3.815111 | 0.050795 |
| hypertension_times | 0.949137 | 0.926198 | 0.972645 | < 0.0001 | 0.010065 | 1.561571 | 0.211438 |
| heart_type_disease_times | 0.997579 | 0.985955 | 1.009341 | 0.6185286 | 0.034646 | 5.375422 | 0.020424 |
| neurological_type_disease_times | 1.077398 | 1.064962 | 1.089979 | < 0.0001 | 2.923921 | 453.658064 | < 0.0001 |
| diabetes_times | 1.018652 | 1.004839 | 1.032656 | 0.007981 | 0.000199 | 0.030808 | 0.860669 |
| hyperlipidemia_times | 0.952495 | 0.917486 | 0.988840 | 0.010855 | 0.000310 | 0.048032 | 0.826523 |
| aspirin_median | 1.000049 | 0.999273 | 1.000826 | 0.900844 | 0.008957 | 1.394397 | 0.237667 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.498952 | 1.291123 | 1.740234 | < 0.0001 | 0.060322 | 9.359166 | 0.002219 |
| age | 1.050483 | 1.045241 | 1.055751 | < 0.0001 | 1.230727 | 190.950219 | < 0.0001 |
| with_psychosis | 1.617605 | 1.349637 | 1.938777 | < 0.0001 | 0.024837 | 3.853527 | 0.049644 |
| hypertension_times | 0.949016 | 0.926071 | 0.972530 | < 0.0001 | 0.010138 | 1.572966 | 0.209779 |
| heart_type_disease_times | 0.997383 | 0.985722 | 1.009181 | 0.662276 | 0.041129 | 6.381261 | 0.011535 |
| neurological_type_disease_times | 1.077609 | 1.065137 | 1.090227 | < 0.0001 | 2.924403 | 453.728277 | < 0.0001 |
| diabetes_times | 1.018501 | 1.004634 | 1.032559 | 0.008767 | 0.000216 | 0.033467 | 0.854846 |
| hyperlipidemia_times | 0.952556 | 0.917571 | 0.988875 | 0.010899 | 0.000547 | 0.084825 | 0.770863 |
| aspirin_hours_diff_mean | 1.000238 | 0.998987 | 1.001491 | 0.709126 | 0.001782 | 0.276555 | 0.598969 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.508346 | 1.299075 | 1.751329 | < 0.0001 | 0.064077 | 9.942164 | 0.001616 |
| age | 1.050773 | 1.045562 | 1.056011 | < 0.0001 | 1.296273 | 201.128862 | < 0.0001 |
| with_psychosis | 1.634782 | 1.363897 | 1.959467 | < 0.0001 | 0.028310 | 4.392600 | 0.036098 |
| hypertension_times | 0.949813 | 0.926828 | 0.973368 | < 0.0001 | 0.010156 | 1.575737 | 0.209378 |
| heart_type_disease_times | 0.998511 | 0.986663 | 1.010502 | 0.806773 | 0.055914 | 8.675517 | 0.003226 |
| neurological_type_disease_times | 1.076461 | 1.063876 | 1.089195 | < 0.0001 | 2.933357 | 455.137600 | < 0.0001 |
| diabetes_times | 1.019086 | 1.005280 | 1.033081 | 0.006593 | 0.000770 | 0.119501 | 0.729577 |
| hyperlipidemia_times | 0.952667 | 0.917679 | 0.988989 | 0.011087 | 0.000803 | 0.124658 | 0.724037 |
| aspirin_hours_diff_max | 0.999744 | 0.998972 | 1.000515 | 0.514782 | 0.033009 | 5.121599 | 0.023632 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.496987 | 1.289836 | 1.737408 | < 0.0001 | 0.058064 | 9.008787 | 0.002687 |
| age | 1.050218 | 1.044986 | 1.055475 | < 0.0001 | 1.195262 | 185.448352 | < 0.0001 |
| with_psychosis | 1.615216 | 1.348660 | 1.934457 | < 0.0001 | 0.023269 | 3.610257 | 0.057427 |
| hypertension_times | 0.949206 | 0.926283 | 0.972697 | < 0.0001 | 0.010480 | 1.625939 | 0.202268 |
| heart_type_disease_times | 0.997666 | 0.986072 | 1.009396 | 0.695167 | 0.038730 | 6.009056 | 0.014234 |
| neurological_type_disease_times | 1.077497 | 1.065115 | 1.090024 | < 0.0001 | 2.921452 | 453.271531 | < 0.0001 |
| diabetes_times | 1.018469 | 1.004587 | 1.032543 | 0.008963 | 0.000124 | 0.019207 | 0.889775 |
| hyperlipidemia_times | 0.952758 | 0.917739 | 0.989113 | 0.011312 | 0.000494 | 0.076710 | 0.781807 |
| aspirin_hours_diff_min | 1.000912 | 0.999486 | 1.002341 | 0.210105 | 0.003634 | 0.563757 | 0.452752 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.497475 | 1.289985 | 1.738339 | < 0.0001 | 0.059347 | 9.207755 | 0.002410 |
| age | 1.050381 | 1.045135 | 1.055653 | < 0.0001 | 1.213777 | 188.319977 | < 0.0001 |
| with_psychosis | 1.614795 | 1.347535 | 1.935062 | < 0.0001 | 0.024064 | 3.733549 | 0.053333 |
| hypertension_times | 0.948959 | 0.926020 | 0.972466 | < 0.0001 | 0.010237 | 1.588348 | 0.207565 |
| heart_type_disease_times | 0.997314 | 0.985684 | 1.009082 | 0.653204 | 0.039253 | 6.090198 | 0.013595 |
| neurological_type_disease_times | 1.077724 | 1.065279 | 1.090315 | < 0.0001 | 2.923096 | 453.524260 | < 0.0001 |
| diabetes_times | 1.018436 | 1.004557 | 1.032507 | 0.009070 | 0.000165 | 0.025666 | 0.872719 |
| hyperlipidemia_times | 0.952578 | 0.917581 | 0.988909 | 0.010961 | 0.000508 | 0.078875 | 0.778828 |
| aspirin_hours_diff_median | 1.000420 | 0.999131 | 1.001711 | 0.523461 | < 0.0001 | 0.009567 | 0.922084 |

Warfarin

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|----------|-------------|----------|
| gender | 1.517574 | 1.306164 | 1.763202 | < 0.0001 | 0.048334 | 7.571079 | 0.005932 |
| age | 1.037615 | 1.031907 | 1.043355 | < 0.0001 | 0.169930 | 26.618283 | < 0.0001 |
| with_psychosis | 0.873141 | 0.730373 | 1.043816 | 0.136432 | 0.014303 | 2.240484 | 0.134442 |
| with_hypertension | 1.394598 | 1.121612 | 1.734024 | 0.002766 | 0.136288 | 21.348538 | < 0.0001 |
| with_heart_type_disease | 1.168804 | 0.973685 | 1.403022 | 0.094169 | 0.099380 | 15.567051 | < 0.0001 |
| with_neurological_type_disease | 9.784997 | 8.336768 | 11.484808 | < 0.0001 | 9.280936 | 1453.787768 | < 0.0001 |
| with_diabetes | 0.937070 | 0.793700 | 1.106339 | 0.442979 | < 0.0001 | 0.002264 | 0.962048 |
| with_hyperlipidemia | 0.824647 | 0.695160 | 0.978253 | 0.026950 | 0.015485 | 2.425598 | 0.119371 |
| warfarin | 1.036479 | 0.857538 | 1.252759 | 0.710983 | 0.110837 | 17.361801 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.501095 | 1.293391 | 1.742154 | < 0.0001 | 0.059292 | 9.199291 | 0.002422 |
| age | 1.050598 | 1.045403 | 1.055818 | < 0.0001 | 1.261110 | 195.664297 | < 0.0001 |
| with_psychosis | 1.622241 | 1.354769 | 1.942521 | < 0.0001 | 0.024180 | 3.751602 | 0.052759 |
| hypertension_times | 0.948600 | 0.925354 | 0.972431 | < 0.0001 | 0.010388 | 1.611753 | 0.204248 |
| heart_type_disease_times | 0.998392 | 0.985725 | 1.011222 | 0.804913 | 0.040838 | 6.336091 | 0.011832 |
| neurological_type_disease_times | 1.077978 | 1.064747 | 1.091374 | < 0.0001 | 2.915118 | 452.287797 | < 0.0001 |
| diabetes_times | 1.018643 | 1.004882 | 1.032592 | 0.007775 | 0.000109 | 0.016942 | 0.896439 |
| hyperlipidemia_times | 0.953463 | 0.918015 | 0.990279 | 0.013690 | 0.000513 | 0.079599 | 0.777842 |
| warfarin_count | 0.997977 | 0.983713 | 1.012448 | 0.782760 | 0.001960 | 0.304052 | 0.581355 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.480613 | 1.275252 | 1.719044 | < 0.0001 | 0.049517 | 7.684769 | 0.005570 |
| age | 1.050326 | 1.045112 | 1.055567 | < 0.0001 | 1.158383 | 179.774804 | < 0.0001 |
| with_psychosis | 1.637052 | 1.367217 | 1.960142 | < 0.0001 | 0.026580 | 4.125116 | 0.042254 |
| hypertension_times | 0.949486 | 0.926655 | 0.972880 | < 0.0001 | 0.010349 | 1.606162 | 0.205035 |
| heart_type_disease_times | 0.992581 | 0.980403 | 1.004909 | 0.237039 | 0.012005 | 1.863055 | 0.172275 |
| neurological_type_disease_times | 1.075838 | 1.063416 | 1.088405 | < 0.0001 | 2.890813 | 448.638585 | < 0.0001 |
| diabetes_times | 1.019489 | 1.005507 | 1.033666 | 0.006156 | 0.000484 | 0.075098 | 0.784054 |
| hyperlipidemia_times | 0.951973 | 0.916733 | 0.988568 | 0.010546 | 0.000637 | 0.098798 | 0.753278 |
| warfarin_mean | 1.074259 | 1.033366 | 1.116771 | 0.000297 | 0.193318 | 30.001920 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.489611 | 1.283177 | 1.729255 | < 0.0001 | 0.051855 | 8.046883 | 0.004559 |
| age | 1.050517 | 1.045308 | 1.055751 | < 0.0001 | 1.188505 | 184.433318 | < 0.0001 |
| with_psychosis | 1.632188 | 1.363199 | 1.954255 | < 0.0001 | 0.025224 | 3.914223 | 0.047882 |
| hypertension_times | 0.949023 | 0.926333 | 0.972268 | < 0.0001 | 0.009940 | 1.542498 | 0.214249 |
| heart_type_disease_times | 0.993106 | 0.980823 | 1.005543 | 0.275961 | 0.012012 | 1.863994 | 0.172167 |
| neurological_type_disease_times | 1.075229 | 1.062730 | 1.087875 | < 0.0001 | 2.880400 | 446.983034 | < 0.0001 |
| diabetes_times | 1.019462 | 1.005469 | 1.033649 | 0.006268 | 0.000472 | 0.073234 | 0.786686 |
| hyperlipidemia_times | 0.952225 | 0.917088 | 0.988708 | 0.010711 | 0.000675 | 0.104796 | 0.746149 |
| warfarin_max | 1.040234 | 1.009942 | 1.071435 | 0.008895 | 0.131051 | 20.336577 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.473771 | 1.269334 | 1.711134 | < 0.0001 | 0.049609 | 7.699244 | 0.005525 |
| age | 1.050051 | 1.044832 | 1.055297 | < 0.0001 | 1.145845 | 177.833328 | < 0.0001 |
| with_psychosis | 1.646241 | 1.374516 | 1.971683 | < 0.0001 | 0.028107 | 4.362224 | 0.036747 |
| hypertension_times | 0.948373 | 0.925661 | 0.971643 | < 0.0001 | 0.010827 | 1.680377 | 0.194877 |
| heart_type_disease_times | 0.994016 | 0.982122 | 1.006054 | 0.328477 | 0.018711 | 2.903854 | 0.088371 |
| neurological_type_disease_times | 1.077994 | 1.065538 | 1.090596 | < 0.0001 | 2.909438 | 451.540149 | < 0.0001 |
| diabetes_times | 1.019462 | 1.005709 | 1.033403 | 0.005411 | 0.000374 | 0.057991 | 0.809700 |
| hyperlipidemia_times | 0.954464 | 0.919447 | 0.990814 | 0.014531 | 0.000618 | 0.095989 | 0.756697 |
| warfarin_min | 1.118914 | 1.062004 | 1.178874 | < 0.0001 | 0.210674 | 32.696304 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.483250 | 1.277591 | 1.722015 | < 0.0001 | 0.049623 | 7.701109 | 0.005520 |
| age | 1.050333 | 1.045120 | 1.055573 | < 0.0001 | 1.160733 | 180.138482 | < 0.0001 |
| with_psychosis | 1.638707 | 1.368614 | 1.962103 | < 0.0001 | 0.026551 | 4.120618 | 0.042366 |
| hypertension_times | 0.950574 | 0.927575 | 0.974142 | < 0.0001 | 0.010387 | 1.611986 | 0.204216 |
| heart_type_disease_times | 0.992741 | 0.980532 | 1.005101 | 0.248483 | 0.012676 | 1.967233 | 0.160745 |
| neurological_type_disease_times | 1.075214 | 1.062789 | 1.087784 | < 0.0001 | 2.891089 | 448.678774 | < 0.0001 |
| diabetes_times | 1.019253 | 1.005198 | 1.033505 | 0.007106 | 0.000472 | 0.073276 | 0.786625 |
| hyperlipidemia_times | 0.950761 | 0.915394 | 0.987493 | 0.009036 | 0.000604 | 0.093768 | 0.759441 |
| warfarin_median | 1.068924 | 1.028488 | 1.110950 | 0.000705 | 0.189238 | 29.368479 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.494373 | 1.287566 | 1.734397 | < 0.0001 | 0.056037 | 8.695815 | 0.003190 |
| age | 1.050240 | 1.045039 | 1.055468 | < 0.0001 | 1.164526 | 180.709739 | < 0.0001 |
| with_psychosis | 1.626727 | 1.358566 | 1.947818 | < 0.0001 | 0.025122 | 3.898438 | 0.048334 |
| hypertension_times | 0.948828 | 0.926084 | 0.972130 | < 0.0001 | 0.010489 | 1.627703 | 0.202024 |
| heart_type_disease_times | 0.994431 | 0.982661 | 1.006341 | 0.357898 | 0.015583 | 2.418102 | 0.119943 |
| neurological_type_disease_times | 1.077104 | 1.064676 | 1.089677 | < 0.0001 | 2.894300 | 449.133990 | < 0.0001 |
| diabetes_times | 1.019318 | 1.005539 | 1.033286 | 0.005862 | 0.000413 | 0.064019 | 0.800254 |
| hyperlipidemia_times | 0.954546 | 0.919556 | 0.990868 | 0.014629 | 0.000923 | 0.143233 | 0.705089 |
| warfarin_hours_diff_mean | 1.006123 | 1.002884 | 1.009373 | 0.000207 | 0.121593 | 18.868712 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.500969 | 1.293336 | 1.741935 | < 0.0001 | 0.058075 | 9.011186 | 0.002684 |
| age | 1.050519 | 1.045320 | 1.055743 | < 0.0001 | 1.219215 | 189.180497 | < 0.0001 |
| with_psychosis | 1.621930 | 1.354631 | 1.941974 | < 0.0001 | 0.023754 | 3.685733 | 0.054882 |
| hypertension_times | 0.948642 | 0.925882 | 0.971962 | < 0.0001 | 0.009693 | 1.504007 | 0.220059 |
| heart_type_disease_times | 0.994569 | 0.982643 | 1.006639 | 0.376220 | 0.015615 | 2.422889 | 0.119577 |
| neurological_type_disease_times | 1.076393 | 1.063967 | 1.088964 | < 0.0001 | 2.882341 | 447.240907 | < 0.0001 |
| diabetes_times | 1.019113 | 1.005239 | 1.033179 | 0.006786 | 0.000348 | 0.053963 | 0.816306 |
| hyperlipidemia_times | 0.953602 | 0.918648 | 0.989886 | 0.012649 | 0.000875 | 0.135769 | 0.712525 |
| warfarin_hours_diff_max | 1.001988 | 1.000268 | 1.003711 | 0.023509 | 0.062756 | 9.737552 | 0.001806 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.496355 | 1.289324 | 1.736629 | < 0.0001 | 0.056818 | 8.816566 | 0.002986 |
| age | 1.050307 | 1.045110 | 1.055530 | < 0.0001 | 1.189697 | 184.608390 | < 0.0001 |
| with_psychosis | 1.631939 | 1.362829 | 1.954188 | < 0.0001 | 0.025896 | 4.018327 | 0.045011 |
| hypertension_times | 0.949238 | 0.926331 | 0.972713 | < 0.0001 | 0.010735 | 1.665763 | 0.196830 |
| heart_type_disease_times | 0.996629 | 0.985019 | 1.008375 | 0.572157 | 0.030608 | 4.749514 | 0.029309 |
| neurological_type_disease_times | 1.077460 | 1.065074 | 1.089991 | < 0.0001 | 2.912507 | 451.941239 | < 0.0001 |
| diabetes_times | 1.018858 | 1.005087 | 1.032819 | 0.007131 | 0.000245 | 0.037956 | 0.845531 |
| hyperlipidemia_times | 0.953727 | 0.918771 | 0.990013 | 0.012891 | 0.000698 | 0.108270 | 0.742123 |
| warfarin_hours_diff_min | 1.007543 | 1.003302 | 1.011802 | 0.000480 | 0.093229 | 14.466654 | 0.000143 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.492856 | 1.286274 | 1.732615 | < 0.0001 | 0.055606 | 8.629075 | 0.003309 |
| age | 1.050119 | 1.044913 | 1.055351 | < 0.0001 | 1.154399 | 179.141540 | < 0.0001 |
| with_psychosis | 1.628709 | 1.360173 | 1.950262 | < 0.0001 | 0.025458 | 3.950650 | 0.046856 |
| hypertension_times | 0.949287 | 0.926469 | 0.972668 | < 0.0001 | 0.010827 | 1.680130 | 0.194910 |
| heart_type_disease_times | 0.994213 | 0.982424 | 1.006143 | 0.340241 | 0.015806 | 2.452756 | 0.117322 |
| neurological_type_disease_times | 1.077233 | 1.064812 | 1.089799 | < 0.0001 | 2.898867 | 449.851067 | < 0.0001 |
| diabetes_times | 1.019309 | 1.005542 | 1.033263 | 0.005840 | 0.000415 | 0.064451 | 0.799596 |
| hyperlipidemia_times | 0.954407 | 0.919384 | 0.990763 | 0.014427 | 0.000885 | 0.137374 | 0.710906 |
| warfarin_hours_diff_median | 1.007466 | 1.003642 | 1.011305 | 0.000126 | 0.134592 | 20.886151 | < 0.0001 |

Clopidogrel

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|----------|-------------|----------|
| gender | 1.539542 | 1.324965 | 1.788870 | < 0.0001 | 0.051693 | 8.096015 | 0.004437 |
| age | 1.037751 | 1.032055 | 1.043479 | < 0.0001 | 0.183410 | 28.725354 | < 0.0001 |
| with_psychosis | 0.863839 | 0.722613 | 1.032666 | 0.108046 | 0.015747 | 2.466320 | 0.116313 |
| with_hypertension | 1.403697 | 1.129807 | 1.743984 | 0.002199 | 0.141907 | 22.225249 | < 0.0001 |
| with_heart_type_disease | 1.227810 | 1.026025 | 1.469281 | 0.025063 | 0.160893 | 25.198783 | < 0.0001 |
| with_neurological_type_disease | 9.819615 | 8.367978 | 11.523075 | < 0.0001 | 9.350274 | 1464.421539 | < 0.0001 |
| with_diabetes | 0.954961 | 0.808696 | 1.127679 | 0.586911 | < 0.0001 | 0.015524 | 0.900844 |
| with_hyperlipidemia | 0.851149 | 0.717255 | 1.010037 | 0.064951 | 0.018024 | 2.822918 | 0.092930 |
| clopidogrel | 0.720269 | 0.573897 | 0.903973 | 0.004641 | 0.002477 | 0.388004 | 0.533352 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503242 | 1.295293 | 1.744575 | < 0.0001 | 0.063299 | 9.823038 | 0.001724 |
| age | 1.050853 | 1.045669 | 1.056063 | < 0.0001 | 1.267864 | 196.752825 | < 0.0001 |
| with_psychosis | 1.569737 | 1.309169 | 1.882167 | < 0.0001 | 0.021681 | 3.364580 | 0.066615 |
| hypertension_times | 0.937657 | 0.915244 | 0.960618 | < 0.0001 | 0.008561 | 1.328588 | 0.249059 |
| heart_type_disease_times | 1.006786 | 0.995523 | 1.018175 | 0.238706 | 0.095665 | 14.845794 | 0.000117 |
| neurological_type_disease_times | 1.086941 | 1.073387 | 1.100665 | < 0.0001 | 2.931379 | 454.904759 | < 0.0001 |
| diabetes_times | 1.021584 | 1.009522 | 1.033789 | 0.000425 | 0.001183 | 0.183613 | 0.668287 |
| hyperlipidemia_times | 0.973635 | 0.939884 | 1.008598 | 0.137719 | 0.003959 | 0.614382 | 0.433144 |
| clopidogrel_count | 0.869259 | 0.806882 | 0.936457 | 0.000226 | 0.147615 | 22.907562 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.502582 | 1.294399 | 1.744247 | < 0.0001 | 0.056953 | 8.836455 | 0.002953 |
| age | 1.050628 | 1.045426 | 1.055857 | < 0.0001 | 1.229428 | 190.751162 | < 0.0001 |
| with_psychosis | 1.622895 | 1.355305 | 1.943319 | < 0.0001 | 0.024484 | 3.798740 | 0.051294 |
| hypertension_times | 0.949176 | 0.926247 | 0.972673 | < 0.0001 | 0.010986 | 1.704461 | 0.191708 |
| heart_type_disease_times | 0.997731 | 0.985939 | 1.009665 | 0.708091 | 0.031193 | 4.839726 | 0.027813 |
| neurological_type_disease_times | 1.077288 | 1.064908 | 1.089811 | < 0.0001 | 2.928922 | 454.435143 | < 0.0001 |
| diabetes_times | 1.018634 | 1.004824 | 1.032633 | 0.008024 | 0.000138 | 0.021419 | 0.883644 |
| hyperlipidemia_times | 0.952664 | 0.917639 | 0.989027 | 0.011172 | 0.000284 | 0.044050 | 0.833760 |
| clopidogrel_mean | 0.999933 | 0.998090 | 1.001780 | 0.943476 | 0.010809 | 1.677084 | 0.195315 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.505012 | 1.296643 | 1.746867 | < 0.0001 | 0.058694 | 9.106536 | 0.002548 |
| age | 1.050680 | 1.045483 | 1.055903 | < 0.0001 | 1.251094 | 194.110043 | < 0.0001 |
| with_psychosis | 1.621425 | 1.354130 | 1.941482 | < 0.0001 | 0.024148 | 3.746646 | 0.052916 |
| hypertension_times | 0.949125 | 0.926195 | 0.972623 | < 0.0001 | 0.010467 | 1.624002 | 0.202537 |
| heart_type_disease_times | 0.998240 | 0.986502 | 1.010118 | 0.770409 | 0.035811 | 5.556189 | 0.018417 |
| neurological_type_disease_times | 1.077071 | 1.064681 | 1.089605 | < 0.0001 | 2.924211 | 453.698002 | < 0.0001 |
| diabetes_times | 1.018611 | 1.004823 | 1.032589 | 0.008004 | 0.000155 | 0.024001 | 0.876883 |
| hyperlipidemia_times | 0.953016 | 0.918057 | 0.989306 | 0.011608 | 0.000432 | 0.067059 | 0.795668 |
| clopidogrel_max | 0.999691 | 0.998520 | 1.000863 | 0.605085 | 0.001136 | 0.176179 | 0.674678 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.504276 | 1.295793 | 1.746302 | < 0.0001 | 0.057023 | 8.847308 | 0.002936 |
| age | 1.050665 | 1.045463 | 1.055894 | < 0.0001 | 1.230105 | 190.855435 | < 0.0001 |
| with_psychosis | 1.621855 | 1.354421 | 1.942095 | < 0.0001 | 0.024400 | 3.785692 | 0.051695 |
| hypertension_times | 0.949097 | 0.926169 | 0.972594 | < 0.0001 | 0.010893 | 1.690134 | 0.193586 |
| heart_type_disease_times | 0.997989 | 0.986207 | 1.009913 | 0.739796 | 0.032279 | 5.008221 | 0.025229 |
| neurological_type_disease_times | 1.077240 | 1.064869 | 1.089754 | < 0.0001 | 2.928109 | 454.307351 | < 0.0001 |
| diabetes_times | 1.018642 | 1.004852 | 1.032621 | 0.007908 | 0.000121 | 0.018811 | 0.890911 |
| hyperlipidemia_times | 0.952995 | 0.917951 | 0.989377 | 0.011780 | 0.000281 | 0.043547 | 0.834698 |
| clopidogrel_min | 0.999633 | 0.997089 | 1.002183 | 0.777405 | 0.008108 | 1.257992 | 0.262034 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.499985 | 1.292170 | 1.741222 | < 0.0001 | 0.056174 | 8.715787 | 0.003155 |
| age | 1.050570 | 1.045366 | 1.055799 | < 0.0001 | 1.222795 | 189.724101 | < 0.0001 |
| with_psychosis | 1.624522 | 1.356645 | 1.945292 | < 0.0001 | 0.024638 | 3.822802 | 0.050562 |
| hypertension_times | 0.949279 | 0.926347 | 0.972778 | < 0.0001 | 0.011146 | 1.729368 | 0.188494 |
| heart_type_disease_times | 0.997318 | 0.985532 | 1.009244 | 0.657850 | 0.030038 | 4.660546 | 0.030866 |
| neurological_type_disease_times | 1.077395 | 1.065020 | 1.089913 | < 0.0001 | 2.930640 | 454.706783 | < 0.0001 |
| diabetes_times | 1.018640 | 1.004808 | 1.032661 | 0.008106 | 0.000126 | 0.019529 | 0.888862 |
| hyperlipidemia_times | 0.952282 | 0.917224 | 0.988680 | 0.010624 | 0.000242 | 0.037497 | 0.846457 |
| clopidogrel_median | 1.000294 | 0.998405 | 1.002187 | 0.760328 | 0.018663 | 2.895742 | 0.088817 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.498310 | 1.290899 | 1.739046 | < 0.0001 | 0.057946 | 8.990622 | 0.002714 |
| age | 1.050515 | 1.045313 | 1.055742 | < 0.0001 | 1.234703 | 191.569220 | < 0.0001 |
| with_psychosis | 1.622750 | 1.355254 | 1.943043 | < 0.0001 | 0.023676 | 3.673368 | 0.055291 |
| hypertension_times | 0.949598 | 0.926604 | 0.973162 | < 0.0001 | 0.011084 | 1.719715 | 0.189733 |
| heart_type_disease_times | 0.996656 | 0.984785 | 1.008670 | 0.583782 | 0.031469 | 4.882548 | 0.027132 |
| neurological_type_disease_times | 1.077280 | 1.064912 | 1.089792 | < 0.0001 | 2.923183 | 453.544024 | < 0.0001 |
| diabetes_times | 1.018346 | 1.004386 | 1.032500 | 0.009841 | < 0.0001 | 0.006872 | 0.933935 |
| hyperlipidemia_times | 0.952003 | 0.916892 | 0.988457 | 0.010303 | 0.000444 | 0.068955 | 0.792865 |
| clopidogrel_hours_diff_mean | 1.001009 | 0.998585 | 1.003438 | 0.414839 | 0.009640 | 1.495747 | 0.221330 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.505267 | 1.297032 | 1.746932 | < 0.0001 | 0.060123 | 9.328375 | 0.002257 |
| age | 1.050691 | 1.045498 | 1.055910 | < 0.0001 | 1.270643 | 197.144885 | < 0.0001 |
| with_psychosis | 1.621842 | 1.354461 | 1.942006 | < 0.0001 | 0.024396 | 3.785161 | 0.051711 |
| hypertension_times | 0.948165 | 0.925274 | 0.971623 | < 0.0001 | 0.009556 | 1.482706 | 0.223354 |
| heart_type_disease_times | 0.999336 | 0.987394 | 1.011422 | 0.913722 | 0.045398 | 7.043662 | 0.007956 |
| neurological_type_disease_times | 1.077822 | 1.065386 | 1.090403 | < 0.0001 | 2.923414 | 453.578518 | < 0.0001 |
| diabetes_times | 1.019302 | 1.005710 | 1.033078 | 0.005250 | 0.000425 | 0.066015 | 0.797230 |
| hyperlipidemia_times | 0.954251 | 0.919319 | 0.990509 | 0.013850 | 0.000567 | 0.087977 | 0.766766 |
| clopidogrel_hours_diff_max | 0.999146 | 0.997386 | 1.000909 | 0.342149 | 0.007514 | 1.165772 | 0.280274 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.492439 | 1.285918 | 1.732129 | < 0.0001 | 0.055685 | 8.640483 | 0.003288 |
| age | 1.050246 | 1.045039 | 1.055479 | < 0.0001 | 1.197945 | 185.882130 | < 0.0001 |
| with_psychosis | 1.621384 | 1.354002 | 1.941568 | < 0.0001 | 0.023984 | 3.721479 | 0.053719 |
| hypertension_times | 0.949445 | 0.926528 | 0.972928 | < 0.0001 | 0.012059 | 1.871168 | 0.171344 |
| heart_type_disease_times | 0.996410 | 0.984737 | 1.008221 | 0.549699 | 0.029797 | 4.623546 | 0.031538 |
| neurological_type_disease_times | 1.077760 | 1.065355 | 1.090309 | < 0.0001 | 2.924705 | 453.819123 | < 0.0001 |
| diabetes_times | 1.018538 | 1.004658 | 1.032610 | 0.008694 | < 0.0001 | 0.007145 | 0.932638 |
| hyperlipidemia_times | 0.953200 | 0.918099 | 0.989643 | 0.012285 | 0.000443 | 0.068715 | 0.793218 |
| clopidogrel_hours_diff_min | 1.003438 | 1.001046 | 1.005836 | 0.004817 | 0.070124 | 10.881030 | 0.000972 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.495836 | 1.288751 | 1.736197 | < 0.0001 | 0.057218 | 8.877838 | 0.002887 |
| age | 1.050443 | 1.045240 | 1.055671 | < 0.0001 | 1.222961 | 189.751006 | < 0.0001 |
| with_psychosis | 1.622340 | 1.354887 | 1.942588 | < 0.0001 | 0.023607 | 3.662766 | 0.055644 |
| hypertension_times | 0.949676 | 0.926674 | 0.973248 | < 0.0001 | 0.011507 | 1.785422 | 0.181488 |
| heart_type_disease_times | 0.996257 | 0.984443 | 1.008212 | 0.537766 | 0.029426 | 4.565677 | 0.032621 |
| neurological_type_disease_times | 1.077332 | 1.064952 | 1.089857 | < 0.0001 | 2.922570 | 453.457221 | < 0.0001 |
| diabetes_times | 1.018277 | 1.004295 | 1.032455 | 0.010245 | < 0.0001 | 0.003423 | 0.953346 |
| hyperlipidemia_times | 0.951942 | 0.916818 | 0.988412 | 0.010240 | 0.000420 | 0.065233 | 0.798409 |
| clopidogrel_hours_diff_median | 1.001626 | 0.999301 | 1.003957 | 0.170716 | 0.022696 | 3.521503 | 0.060580 |

Apixaban

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|----------|-------------|----------|
| gender | 1.521965 | 1.309826 | 1.768461 | < 0.0001 | 0.049147 | 7.698931 | 0.005526 |
| age | 1.038358 | 1.032669 | 1.044078 | < 0.0001 | 0.195033 | 30.552105 | < 0.0001 |
| with_psychosis | 0.888250 | 0.743017 | 1.061872 | 0.193287 | 0.010294 | 1.612551 | 0.204136 |
| with_hypertension | 1.398036 | 1.125267 | 1.736925 | 0.002481 | 0.142450 | 22.315016 | < 0.0001 |
| with_heart_type_disease | 1.244432 | 1.041628 | 1.486722 | 0.015983 | 0.194774 | 30.511602 | < 0.0001 |
| with_neurological_type_disease | 9.970941 | 8.497015 | 11.700539 | < 0.0001 | 9.410664 | 1474.192265 | < 0.0001 |
| with_diabetes | 0.928582 | 0.786378 | 1.096501 | 0.382282 | < 0.0001 | 0.001919 | 0.965063 |
| with_hyperlipidemia | 0.840956 | 0.709316 | 0.997026 | 0.046124 | 0.019261 | 3.017271 | 0.082385 |
| apixaban | 0.323675 | 0.206786 | 0.506637 | < 0.0001 | 0.150447 | 23.567768 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.502296 | 1.294441 | 1.743526 | < 0.0001 | 0.057496 | 8.921955 | 0.002818 |
| age | 1.050941 | 1.045750 | 1.056159 | < 0.0001 | 1.277462 | 198.231178 | < 0.0001 |
| with_psychosis | 1.658125 | 1.384743 | 1.985478 | < 0.0001 | 0.030094 | 4.669865 | 0.030699 |
| hypertension_times | 0.949938 | 0.927079 | 0.973359 | < 0.0001 | 0.011199 | 1.737755 | 0.187426 |
| heart_type_disease_times | 1.000538 | 0.988991 | 1.012220 | 0.927583 | 0.065126 | 10.105999 | 0.001478 |
| neurological_type_disease_times | 1.075615 | 1.063274 | 1.088099 | < 0.0001 | 2.939392 | 456.122567 | < 0.0001 |
| diabetes_times | 1.017851 | 1.003981 | 1.031912 | 0.011487 | < 0.0001 | 0.001307 | 0.971164 |
| hyperlipidemia_times | 0.952350 | 0.917620 | 0.988393 | 0.009997 | 0.000667 | 0.103544 | 0.747618 |
| apixaban_count | 0.786977 | 0.659105 | 0.939658 | 0.008099 | 0.108129 | 16.779053 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.507155 | 1.298624 | 1.749171 | < 0.0001 | 0.059369 | 9.212237 | 0.002405 |
| age | 1.051017 | 1.045833 | 1.056228 | < 0.0001 | 1.298644 | 201.509263 | < 0.0001 |
| with_psychosis | 1.653752 | 1.381066 | 1.980279 | < 0.0001 | 0.028670 | 4.448739 | 0.034929 |
| hypertension_times | 0.949540 | 0.926606 | 0.973041 | < 0.0001 | 0.010188 | 1.580807 | 0.208647 |
| heart_type_disease_times | 0.999989 | 0.988457 | 1.011654 | 0.998457 | 0.051091 | 7.927779 | 0.004869 |
| neurological_type_disease_times | 1.075847 | 1.063522 | 1.088315 | < 0.0001 | 2.929237 | 454.526853 | < 0.0001 |
| diabetes_times | 1.017988 | 1.004092 | 1.032076 | 0.011013 | < 0.0001 | 0.008134 | 0.928138 |
| hyperlipidemia_times | 0.952654 | 0.917857 | 0.988769 | 0.010623 | 0.000611 | 0.094741 | 0.758235 |
| apixaban_mean | 0.853415 | 0.773339 | 0.941782 | 0.001615 | 0.077197 | 11.978558 | 0.000538 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.507050 | 1.298526 | 1.749061 | < 0.0001 | 0.059186 | 9.183955 | 0.002442 |
| age | 1.051038 | 1.045853 | 1.056249 | < 0.0001 | 1.299945 | 201.713643 | < 0.0001 |
| with_psychosis | 1.655332 | 1.382411 | 1.982134 | < 0.0001 | 0.029029 | 4.504459 | 0.033809 |
| hypertension_times | 0.949624 | 0.926696 | 0.973119 | < 0.0001 | 0.010319 | 1.601211 | 0.205734 |
| heart_type_disease_times | 1.000070 | 0.988538 | 1.011737 | 0.990548 | 0.051860 | 8.047194 | 0.004558 |
| neurological_type_disease_times | 1.075783 | 1.063458 | 1.088250 | < 0.0001 | 2.930068 | 454.661291 | < 0.0001 |
| diabetes_times | 1.017944 | 1.004043 | 1.032039 | 0.011244 | < 0.0001 | 0.006740 | 0.934569 |
| hyperlipidemia_times | 0.952685 | 0.917890 | 0.988799 | 0.010669 | 0.000639 | 0.099117 | 0.752893 |
| apixaban_max | 0.857622 | 0.781286 | 0.941416 | 0.001241 | 0.085603 | 13.283041 | 0.000268 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.507161 | 1.298637 | 1.749169 | < 0.0001 | 0.059513 | 9.234347 | 0.002376 |
| age | 1.050978 | 1.045793 | 1.056189 | < 0.0001 | 1.295057 | 200.948769 | < 0.0001 |
| with_psychosis | 1.650190 | 1.378068 | 1.976046 | < 0.0001 | 0.028010 | 4.346276 | 0.037092 |
| hypertension_times | 0.949458 | 0.926523 | 0.972960 | < 0.0001 | 0.010133 | 1.572273 | 0.209880 |
| heart_type_disease_times | 0.999782 | 0.988247 | 1.011452 | 0.970653 | 0.049548 | 7.688107 | 0.005560 |
| neurological_type_disease_times | 1.076002 | 1.063673 | 1.088474 | < 0.0001 | 2.927546 | 454.255542 | < 0.0001 |
| diabetes_times | 1.018063 | 1.004173 | 1.032145 | 0.010646 | < 0.0001 | 0.010024 | 0.920250 |
| hyperlipidemia_times | 0.952524 | 0.917720 | 0.988649 | 0.010436 | 0.000570 | 0.088504 | 0.766089 |
| apixaban_min | 0.855815 | 0.771691 | 0.949109 | 0.003184 | 0.063477 | 9.849402 | 0.001699 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.507149 | 1.298623 | 1.749158 | < 0.0001 | 0.059395 | 9.216277 | 0.002399 |
| age | 1.051014 | 1.045829 | 1.056224 | < 0.0001 | 1.298744 | 201.525186 | < 0.0001 |
| with_psychosis | 1.653724 | 1.381042 | 1.980246 | < 0.0001 | 0.028694 | 4.452438 | 0.034854 |
| hypertension_times | 0.949501 | 0.926560 | 0.973010 | < 0.0001 | 0.010141 | 1.573632 | 0.209683 |
| heart_type_disease_times | 0.999997 | 0.988468 | 1.011659 | 0.999550 | 0.051161 | 7.938563 | 0.004840 |
| neurological_type_disease_times | 1.075835 | 1.063509 | 1.088304 | < 0.0001 | 2.929270 | 454.532715 | < 0.0001 |
| diabetes_times | 1.017982 | 1.004085 | 1.032071 | 0.011046 | < 0.0001 | 0.007930 | 0.929043 |
| hyperlipidemia_times | 0.952733 | 0.917934 | 0.988851 | 0.010755 | 0.000623 | 0.096692 | 0.755837 |
| apixaban_median | 0.852408 | 0.771968 | 0.941230 | 0.001591 | 0.078241 | 12.140579 | 0.000494 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.500979 | 1.293306 | 1.742000 | < 0.0001 | 0.058004 | 9.000404 | 0.002700 |
| age | 1.050979 | 1.045787 | 1.056197 | < 0.0001 | 1.293582 | 200.722307 | < 0.0001 |
| with_psychosis | 1.652830 | 1.380211 | 1.979296 | < 0.0001 | 0.028738 | 4.459272 | 0.034715 |
| hypertension_times | 0.949924 | 0.927047 | 0.973366 | < 0.0001 | 0.010512 | 1.631079 | 0.201557 |
| heart_type_disease_times | 0.999750 | 0.988190 | 1.011445 | 0.966390 | 0.051871 | 8.048694 | 0.004554 |
| neurological_type_disease_times | 1.076024 | 1.063689 | 1.088502 | < 0.0001 | 2.938255 | 455.922557 | < 0.0001 |
| diabetes_times | 1.017986 | 1.004138 | 1.032025 | 0.010746 | < 0.0001 | 0.008179 | 0.927940 |
| hyperlipidemia_times | 0.952297 | 0.917508 | 0.988406 | 0.010049 | 0.000505 | 0.078324 | 0.779582 |
| apixaban_hours_diff_mean | 0.990713 | 0.983615 | 0.997863 | 0.010984 | 0.071639 | 11.116005 | 0.000856 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.500044 | 1.292488 | 1.740932 | < 0.0001 | 0.057411 | 8.908718 | 0.002839 |
| age | 1.050971 | 1.045779 | 1.056189 | < 0.0001 | 1.288585 | 199.954786 | < 0.0001 |
| with_psychosis | 1.658004 | 1.384603 | 1.985390 | < 0.0001 | 0.030145 | 4.677763 | 0.030558 |
| hypertension_times | 0.950091 | 0.927231 | 0.973514 | < 0.0001 | 0.010900 | 1.691405 | 0.193419 |
| heart_type_disease_times | 1.000207 | 0.988656 | 1.011894 | 0.972085 | 0.057283 | 8.888760 | 0.002870 |
| neurological_type_disease_times | 1.075759 | 1.063424 | 1.088237 | < 0.0001 | 2.943190 | 456.706249 | < 0.0001 |
| diabetes_times | 1.017882 | 1.004038 | 1.031917 | 0.011191 | < 0.0001 | 0.008897 | 0.924850 |
| hyperlipidemia_times | 0.952244 | 0.917510 | 0.988293 | 0.009848 | 0.000485 | 0.075292 | 0.783783 |
| apixaban_hours_diff_max | 0.993304 | 0.988431 | 0.998200 | 0.007408 | 0.099281 | 15.405756 | < 0.0001 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.501637 | 1.293917 | 1.742703 | < 0.0001 | 0.059023 | 9.157714 | 0.002477 |
| age | 1.050820 | 1.045625 | 1.056040 | < 0.0001 | 1.275738 | 197.937753 | < 0.0001 |
| with_psychosis | 1.632323 | 1.363142 | 1.954661 | < 0.0001 | 0.025150 | 3.902105 | 0.048228 |
| hypertension_times | 0.949369 | 0.926443 | 0.972863 | < 0.0001 | 0.010179 | 1.579380 | 0.208853 |
| heart_type_disease_times | 0.998315 | 0.986756 | 1.010009 | 0.776530 | 0.042366 | 6.573344 | 0.010353 |
| neurological_type_disease_times | 1.076880 | 1.064534 | 1.089369 | < 0.0001 | 2.927783 | 454.261653 | < 0.0001 |
| diabetes_times | 1.018450 | 1.004628 | 1.032461 | 0.008733 | 0.000129 | 0.019981 | 0.887592 |
| hyperlipidemia_times | 0.952538 | 0.917616 | 0.988789 | 0.010724 | 0.000510 | 0.079103 | 0.778518 |
| apixaban_hours_diff_min | 0.993332 | 0.984835 | 1.001902 | 0.126918 | 0.015763 | 2.445649 | 0.117854 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.501852 | 1.294069 | 1.742999 | < 0.0001 | 0.058342 | 9.052628 | 0.002624 |
| age | 1.050961 | 1.045768 | 1.056179 | < 0.0001 | 1.291064 | 200.327993 | < 0.0001 |
| with_psychosis | 1.649646 | 1.377547 | 1.975491 | < 0.0001 | 0.027972 | 4.340318 | 0.037222 |
| hypertension_times | 0.949877 | 0.927003 | 0.973316 | < 0.0001 | 0.010428 | 1.618124 | 0.203356 |
| heart_type_disease_times | 0.999487 | 0.987924 | 1.011185 | 0.931091 | 0.049607 | 7.697228 | 0.005532 |
| neurological_type_disease_times | 1.076203 | 1.063868 | 1.088680 | < 0.0001 | 2.935735 | 455.523448 | < 0.0001 |
| diabetes_times | 1.018016 | 1.004160 | 1.032064 | 0.010660 | < 0.0001 | 0.008808 | 0.925229 |
| hyperlipidemia_times | 0.952264 | 0.917445 | 0.988404 | 0.010063 | 0.000517 | 0.080241 | 0.776972 |
| apixaban_hours_diff_median | 0.990880 | 0.983519 | 0.998295 | 0.016020 | 0.059022 | 9.158203 | 0.002477 |

Rivaroxaban

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|----------|-------------|----------|
| gender | 1.517723 | 1.306308 | 1.763354 | < 0.0001 | 0.051929 | 8.133514 | 0.004346 |
| age | 1.037492 | 1.031797 | 1.043218 | < 0.0001 | 0.183581 | 28.753925 | < 0.0001 |
| with_psychosis | 0.878077 | 0.734580 | 1.049607 | 0.153245 | 0.013601 | 2.130281 | 0.144417 |
| with_hypertension | 1.397143 | 1.123701 | 1.737124 | 0.002617 | 0.141391 | 22.145755 | < 0.0001 |
| with_heart_type_disease | 1.204272 | 1.007157 | 1.439965 | 0.041534 | 0.173878 | 27.234084 | < 0.0001 |
| with_neurological_type_disease | 9.782959 | 8.337089 | 11.479581 | < 0.0001 | 9.350025 | 1464.475365 | < 0.0001 |
| with_diabetes | 0.935304 | 0.792212 | 1.104240 | 0.429818 | < 0.0001 | 0.003317 | 0.954073 |
| with_hyperlipidemia | 0.830655 | 0.700303 | 0.985269 | 0.033142 | 0.017876 | 2.799920 | 0.094272 |
| rivaroxaban | 0.434431 | 0.232272 | 0.812541 | 0.009060 | 0.046669 | 7.309714 | 0.006859 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.502691 | 1.294869 | 1.743868 | < 0.0001 | 0.059608 | 9.248715 | 0.002357 |
| age | 1.050594 | 1.045405 | 1.055808 | < 0.0001 | 1.259890 | 195.482257 | < 0.0001 |
| with_psychosis | 1.630295 | 1.361543 | 1.952095 | < 0.0001 | 0.025800 | 4.003016 | 0.045421 |
| hypertension_times | 0.949221 | 0.926338 | 0.972669 | < 0.0001 | 0.010675 | 1.656241 | 0.198114 |
| heart_type_disease_times | 0.998239 | 0.986654 | 1.009961 | 0.767334 | 0.048286 | 7.491936 | 0.006199 |
| neurological_type_disease_times | 1.077116 | 1.064765 | 1.089611 | < 0.0001 | 2.933589 | 455.170487 | < 0.0001 |
| diabetes_times | 1.018316 | 1.004429 | 1.032395 | 0.009577 | < 0.0001 | 0.005005 | 0.943601 |
| hyperlipidemia_times | 0.952737 | 0.917758 | 0.989049 | 0.011183 | 0.000588 | 0.091237 | 0.762610 |
| rivaroxaban_count | 0.903266 | 0.743711 | 1.097053 | 0.304930 | 0.028188 | 4.373612 | 0.036502 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.506904 | 1.298486 | 1.748775 | < 0.0001 | 0.061244 | 9.502748 | 0.002052 |
| age | 1.050643 | 1.045460 | 1.055851 | < 0.0001 | 1.275987 | 197.984293 | < 0.0001 |
| with_psychosis | 1.634308 | 1.364951 | 1.956819 | < 0.0001 | 0.026282 | 4.077995 | 0.043448 |
| hypertension_times | 0.949155 | 0.926231 | 0.972647 | < 0.0001 | 0.009913 | 1.538183 | 0.214891 |
| heart_type_disease_times | 0.998727 | 0.987193 | 1.010396 | 0.829867 | 0.046703 | 7.246488 | 0.007105 |
| neurological_type_disease_times | 1.076751 | 1.064403 | 1.089243 | < 0.0001 | 2.924417 | 453.757650 | < 0.0001 |
| diabetes_times | 1.018052 | 1.004111 | 1.032187 | 0.010988 | < 0.0001 | 0.008895 | 0.924861 |
| hyperlipidemia_times | 0.952972 | 0.917964 | 0.989315 | 0.011651 | 0.000659 | 0.102284 | 0.749106 |
| rivaroxaban_mean | 0.959918 | 0.925835 | 0.995255 | 0.026568 | 0.044091 | 6.841290 | 0.008909 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.506614 | 1.298238 | 1.748436 | < 0.0001 | 0.061191 | 9.494499 | 0.002061 |
| age | 1.050645 | 1.045462 | 1.055852 | < 0.0001 | 1.276077 | 197.998408 | < 0.0001 |
| with_psychosis | 1.634608 | 1.365206 | 1.957171 | < 0.0001 | 0.026340 | 4.086904 | 0.043219 |
| hypertension_times | 0.949136 | 0.926213 | 0.972627 | < 0.0001 | 0.009913 | 1.538110 | 0.214902 |
| heart_type_disease_times | 0.998734 | 0.987200 | 1.010402 | 0.830708 | 0.046782 | 7.258817 | 0.007056 |
| neurological_type_disease_times | 1.076768 | 1.064420 | 1.089259 | < 0.0001 | 2.925139 | 453.870072 | < 0.0001 |
| diabetes_times | 1.018058 | 1.004118 | 1.032191 | 0.010953 | < 0.0001 | 0.008833 | 0.925123 |
| hyperlipidemia_times | 0.952966 | 0.917960 | 0.989306 | 0.011636 | 0.000668 | 0.103703 | 0.747431 |
| rivaroxaban_max | 0.961152 | 0.928037 | 0.995449 | 0.026763 | 0.044635 | 6.925710 | 0.008498 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.506975 | 1.298545 | 1.748860 | < 0.0001 | 0.061245 | 9.502821 | 0.002052 |
| age | 1.050643 | 1.045461 | 1.055852 | < 0.0001 | 1.275944 | 197.977065 | < 0.0001 |
| with_psychosis | 1.633825 | 1.364544 | 1.956248 | < 0.0001 | 0.026172 | 4.060848 | 0.043891 |
| hypertension_times | 0.949169 | 0.926245 | 0.972661 | < 0.0001 | 0.009917 | 1.538661 | 0.214820 |
| heart_type_disease_times | 0.998695 | 0.987162 | 1.010363 | 0.825638 | 0.046343 | 7.190675 | 0.007329 |
| neurological_type_disease_times | 1.076751 | 1.064403 | 1.089243 | < 0.0001 | 2.923903 | 453.676586 | < 0.0001 |
| diabetes_times | 1.018073 | 1.004136 | 1.032203 | 0.010870 | < 0.0001 | 0.009740 | 0.921385 |
| hyperlipidemia_times | 0.952954 | 0.917952 | 0.989292 | 0.011608 | 0.000640 | 0.099274 | 0.752703 |
| rivaroxaban_min | 0.959246 | 0.924240 | 0.995578 | 0.028265 | 0.042109 | 6.533612 | 0.010587 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.506992 | 1.298560 | 1.748880 | < 0.0001 | 0.061249 | 9.503443 | 0.002051 |
| age | 1.050641 | 1.045459 | 1.055849 | < 0.0001 | 1.275893 | 197.969687 | < 0.0001 |
| with_psychosis | 1.634156 | 1.364822 | 1.956640 | < 0.0001 | 0.026280 | 4.077634 | 0.043457 |
| hypertension_times | 0.949184 | 0.926260 | 0.972675 | < 0.0001 | 0.009920 | 1.539201 | 0.214739 |
| heart_type_disease_times | 0.998722 | 0.987188 | 1.010391 | 0.829160 | 0.046689 | 7.244404 | 0.007113 |
| neurological_type_disease_times | 1.076731 | 1.064383 | 1.089222 | < 0.0001 | 2.924201 | 453.723995 | < 0.0001 |
| diabetes_times | 1.018049 | 1.004108 | 1.032184 | 0.010999 | < 0.0001 | 0.008808 | 0.925227 |
| hyperlipidemia_times | 0.952989 | 0.917980 | 0.989333 | 0.011684 | 0.000660 | 0.102418 | 0.748948 |
| rivaroxaban_median | 0.960185 | 0.926177 | 0.995441 | 0.027222 | 0.043822 | 6.799537 | 0.009119 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503467 | 1.295533 | 1.744775 | < 0.0001 | 0.059808 | 9.279681 | 0.002318 |
| age | 1.050654 | 1.045466 | 1.055868 | < 0.0001 | 1.271889 | 197.343565 | < 0.0001 |
| with_psychosis | 1.633923 | 1.364574 | 1.956439 | < 0.0001 | 0.026326 | 4.084722 | 0.043275 |
| hypertension_times | 0.949282 | 0.926392 | 0.972738 | < 0.0001 | 0.010244 | 1.589489 | 0.207402 |
| heart_type_disease_times | 0.998292 | 0.986738 | 1.009980 | 0.773420 | 0.043426 | 6.737961 | 0.009440 |
| neurological_type_disease_times | 1.076990 | 1.064641 | 1.089482 | < 0.0001 | 2.928085 | 454.315393 | < 0.0001 |
| diabetes_times | 1.018261 | 1.004379 | 1.032335 | 0.009771 | < 0.0001 | 0.013750 | 0.906653 |
| hyperlipidemia_times | 0.952828 | 0.917865 | 0.989124 | 0.011300 | 0.000541 | 0.083886 | 0.772099 |
| rivaroxaban_hours_diff_mean | 0.991745 | 0.981032 | 1.002575 | 0.134684 | 0.026540 | 4.117958 | 0.042433 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503170 | 1.295288 | 1.744416 | < 0.0001 | 0.059871 | 9.289624 | 0.002305 |
| age | 1.050627 | 1.045439 | 1.055840 | < 0.0001 | 1.268904 | 196.883314 | < 0.0001 |
| with_psychosis | 1.634400 | 1.364974 | 1.957007 | < 0.0001 | 0.026711 | 4.144436 | 0.041774 |
| hypertension_times | 0.949239 | 0.926360 | 0.972683 | < 0.0001 | 0.010394 | 1.612667 | 0.204120 |
| heart_type_disease_times | 0.998322 | 0.986760 | 1.010019 | 0.777500 | 0.045189 | 7.011504 | 0.008100 |
| neurological_type_disease_times | 1.077059 | 1.064712 | 1.089549 | < 0.0001 | 2.937776 | 455.825709 | < 0.0001 |
| diabetes_times | 1.018258 | 1.004376 | 1.032333 | 0.009785 | < 0.0001 | 0.010087 | 0.920000 |
| hyperlipidemia_times | 0.952747 | 0.917789 | 0.989038 | 0.011153 | 0.000519 | 0.080458 | 0.776679 |
| rivaroxaban_hours_diff_max | 0.995069 | 0.988027 | 1.002162 | 0.172576 | 0.036728 | 5.698700 | 0.016979 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503232 | 1.295312 | 1.744526 | < 0.0001 | 0.059570 | 9.242553 | 0.002365 |
| age | 1.050681 | 1.045490 | 1.055898 | < 0.0001 | 1.269801 | 197.015435 | < 0.0001 |
| with_psychosis | 1.629008 | 1.360460 | 1.950567 | < 0.0001 | 0.025072 | 3.889963 | 0.048578 |
| hypertension_times | 0.949253 | 0.926323 | 0.972751 | < 0.0001 | 0.010148 | 1.574584 | 0.209545 |
| heart_type_disease_times | 0.997979 | 0.986423 | 1.009671 | 0.733572 | 0.041011 | 6.362984 | 0.011654 |
| neurological_type_disease_times | 1.077061 | 1.064699 | 1.089567 | < 0.0001 | 2.923632 | 453.615087 | < 0.0001 |
| diabetes_times | 1.018457 | 1.004608 | 1.032497 | 0.008841 | 0.000130 | 0.020225 | 0.886911 |
| hyperlipidemia_times | 0.952720 | 0.917734 | 0.989039 | 0.011169 | 0.000524 | 0.081303 | 0.775539 |
| rivaroxaban_hours_diff_min | 0.990999 | 0.976381 | 1.005835 | 0.233032 | 0.011838 | 1.836734 | 0.175337 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503317 | 1.295396 | 1.744611 | < 0.0001 | 0.059734 | 9.268178 | 0.002332 |
| age | 1.050662 | 1.045473 | 1.055876 | < 0.0001 | 1.271683 | 197.310833 | < 0.0001 |
| with_psychosis | 1.633094 | 1.363878 | 1.955451 | < 0.0001 | 0.026063 | 4.043847 | 0.044335 |
| hypertension_times | 0.949327 | 0.926429 | 0.972790 | < 0.0001 | 0.010252 | 1.590734 | 0.207224 |
| heart_type_disease_times | 0.998248 | 0.986696 | 1.009935 | 0.767792 | 0.042816 | 6.643248 | 0.009955 |
| neurological_type_disease_times | 1.076947 | 1.064595 | 1.089442 | < 0.0001 | 2.926172 | 454.016712 | < 0.0001 |
| diabetes_times | 1.018273 | 1.004395 | 1.032343 | 0.009702 | < 0.0001 | 0.014628 | 0.903734 |
| hyperlipidemia_times | 0.952891 | 0.917924 | 0.989190 | 0.011413 | 0.000547 | 0.084801 | 0.770894 |
| rivaroxaban_hours_diff_median | 0.991163 | 0.979618 | 1.002845 | 0.137599 | 0.023614 | 3.663824 | 0.055608 |

Dabigatran etexilate

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|----------|-------------|----------|
| gender | 1.519763 | 1.308073 | 1.765711 | < 0.0001 | 0.050876 | 7.968110 | 0.004762 |
| age | 1.037637 | 1.031935 | 1.043371 | < 0.0001 | 0.183442 | 28.730187 | < 0.0001 |
| with_psychosis | 0.871141 | 0.728778 | 1.041313 | 0.129697 | 0.015577 | 2.439604 | 0.118309 |
| with_hypertension | 1.396858 | 1.123531 | 1.736679 | 0.002626 | 0.140982 | 22.080278 | < 0.0001 |
| with_heart_type_disease | 1.182739 | 0.989283 | 1.414026 | 0.065515 | 0.157245 | 24.627387 | < 0.0001 |
| with_neurological_type_disease | 9.804935 | 8.355660 | 11.505585 | < 0.0001 | 9.349800 | 1464.343867 | < 0.0001 |
| with_diabetes | 0.936725 | 0.793415 | 1.105922 | 0.440374 | < 0.0001 | 0.008578 | 0.926207 |
| with_hyperlipidemia | 0.826428 | 0.696757 | 0.980232 | 0.028579 | 0.016744 | 2.622352 | 0.105371 |
| dabigatran etexilate | 0.743575 | 0.352405 | 1.568946 | 0.436739 | 0.000810 | 0.126918 | 0.721650 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.501595 | 1.293899 | 1.742630 | < 0.0001 | 0.059218 | 9.187862 | 0.002437 |
| age | 1.050625 | 1.045431 | 1.055845 | < 0.0001 | 1.264062 | 196.122358 | < 0.0001 |
| with_psychosis | 1.622995 | 1.355465 | 1.943328 | < 0.0001 | 0.024031 | 3.728505 | 0.053494 |
| hypertension_times | 0.949142 | 0.926208 | 0.972644 | < 0.0001 | 0.010233 | 1.587709 | 0.207656 |
| heart_type_disease_times | 0.997490 | 0.985851 | 1.009266 | 0.674680 | 0.037097 | 5.755738 | 0.016437 |
| neurological_type_disease_times | 1.077401 | 1.065021 | 1.089925 | < 0.0001 | 2.923478 | 453.584816 | < 0.0001 |
| diabetes_times | 1.018701 | 1.004887 | 1.032704 | 0.007817 | 0.000197 | 0.030578 | 0.861185 |
| hyperlipidemia_times | 0.952564 | 0.917576 | 0.988887 | 0.010920 | 0.000480 | 0.074515 | 0.784873 |
| dabigatran etexilate_count | 1.034141 | 0.816619 | 1.309604 | 0.780532 | 0.002047 | 0.317586 | 0.573063 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.501963 | 1.294175 | 1.743112 | < 0.0001 | 0.058975 | 9.150063 | 0.002488 |
| age | 1.050617 | 1.045423 | 1.055836 | < 0.0001 | 1.261168 | 195.673644 | < 0.0001 |
| with_psychosis | 1.623246 | 1.355687 | 1.943612 | < 0.0001 | 0.024067 | 3.734124 | 0.053314 |
| hypertension_times | 0.949194 | 0.926270 | 0.972685 | < 0.0001 | 0.010291 | 1.596636 | 0.206383 |
| heart_type_disease_times | 0.997627 | 0.986017 | 1.009375 | 0.690835 | 0.037240 | 5.777826 | 0.016231 |
| neurological_type_disease_times | 1.077321 | 1.064952 | 1.089833 | < 0.0001 | 2.923270 | 453.553441 | < 0.0001 |
| diabetes_times | 1.018644 | 1.004827 | 1.032651 | 0.008023 | 0.000196 | 0.030372 | 0.861650 |
| hyperlipidemia_times | 0.952593 | 0.917616 | 0.988903 | 0.010939 | 0.000497 | 0.077086 | 0.781287 |
| dabigatran etexilate_mean | 1.000112 | 0.994804 | 1.005448 | 0.967116 | 0.003279 | 0.508755 | 0.475680 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.502091 | 1.294288 | 1.743258 | < 0.0001 | 0.059012 | 9.155824 | 0.002480 |
| age | 1.050617 | 1.045424 | 1.055836 | < 0.0001 | 1.261306 | 195.695017 | < 0.0001 |
| with_psychosis | 1.623194 | 1.355645 | 1.943546 | < 0.0001 | 0.024062 | 3.733349 | 0.053339 |
| hypertension_times | 0.949195 | 0.926272 | 0.972686 | < 0.0001 | 0.010288 | 1.596226 | 0.206442 |
| heart_type_disease_times | 0.997649 | 0.986040 | 1.009395 | 0.693511 | 0.037383 | 5.799994 | 0.016028 |
| neurological_type_disease_times | 1.077311 | 1.064943 | 1.089823 | < 0.0001 | 2.923290 | 453.556100 | < 0.0001 |
| diabetes_times | 1.018635 | 1.004817 | 1.032644 | 0.008061 | 0.000193 | 0.029925 | 0.862661 |
| hyperlipidemia_times | 0.952589 | 0.917614 | 0.988897 | 0.010929 | 0.000497 | 0.077075 | 0.781301 |
| dabigatran_etexilate_max | 0.999988 | 0.994718 | 1.005286 | 0.996437 | 0.002771 | 0.429953 | 0.512014 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.501830 | 1.294058 | 1.742961 | < 0.0001 | 0.058928 | 9.142862 | 0.002497 |
| age | 1.050617 | 1.045423 | 1.055836 | < 0.0001 | 1.261000 | 195.647736 | < 0.0001 |
| with_psychosis | 1.623299 | 1.355729 | 1.943677 | < 0.0001 | 0.024070 | 3.734550 | 0.053301 |
| hypertension_times | 0.949193 | 0.926268 | 0.972685 | < 0.0001 | 0.010295 | 1.597375 | 0.206278 |
| heart_type_disease_times | 0.997606 | 0.985995 | 1.009354 | 0.688188 | 0.037101 | 5.756394 | 0.016430 |
| neurological_type_disease_times | 1.077330 | 1.064961 | 1.089842 | < 0.0001 | 2.923229 | 453.547467 | < 0.0001 |
| diabetes_times | 1.018653 | 1.004838 | 1.032657 | 0.007985 | 0.000198 | 0.030764 | 0.860768 |
| hyperlipidemia_times | 0.952597 | 0.917619 | 0.988909 | 0.010950 | 0.000497 | 0.077136 | 0.781217 |
| dabigatran_etexilate_min | 1.000238 | 0.994916 | 1.005588 | 0.930403 | 0.003895 | 0.604395 | 0.436908 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.501969 | 1.294183 | 1.743116 | < 0.0001 | 0.058988 | 9.152086 | 0.002485 |
| age | 1.050617 | 1.045423 | 1.055836 | < 0.0001 | 1.261214 | 195.680812 | < 0.0001 |
| with_psychosis | 1.623246 | 1.355686 | 1.943612 | < 0.0001 | 0.024070 | 3.734545 | 0.053301 |
| hypertension_times | 0.949194 | 0.926270 | 0.972685 | < 0.0001 | 0.010290 | 1.596566 | 0.206393 |
| heart_type_disease_times | 0.997628 | 0.986017 | 1.009375 | 0.690923 | 0.037261 | 5.781148 | 0.016201 |
| neurological_type_disease_times | 1.077320 | 1.064952 | 1.089833 | < 0.0001 | 2.923263 | 453.552228 | < 0.0001 |
| diabetes_times | 1.018644 | 1.004827 | 1.032651 | 0.008025 | 0.000195 | 0.030293 | 0.861827 |
| hyperlipidemia_times | 0.952593 | 0.917616 | 0.988903 | 0.010939 | 0.000497 | 0.077097 | 0.781271 |
| dabigatran_etexilate_median | 1.000108 | 0.994806 | 1.005437 | 0.968334 | 0.003169 | 0.491753 | 0.483148 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.499575 | 1.292090 | 1.740378 | < 0.0001 | 0.058615 | 9.094559 | 0.002564 |
| age | 1.050594 | 1.045399 | 1.055815 | < 0.0001 | 1.258333 | 195.238214 | < 0.0001 |
| with_psychosis | 1.622443 | 1.355002 | 1.942670 | < 0.0001 | 0.023797 | 3.692329 | 0.054666 |
| hypertension_times | 0.949174 | 0.926238 | 0.972678 | < 0.0001 | 0.010284 | 1.595615 | 0.206528 |
| heart_type_disease_times | 0.997312 | 0.985693 | 1.009068 | 0.652583 | 0.035507 | 5.509199 | 0.018918 |
| neurological_type_disease_times | 1.077450 | 1.065078 | 1.089966 | < 0.0001 | 2.923182 | 453.549969 | < 0.0001 |
| diabetes_times | 1.018707 | 1.004903 | 1.032700 | 0.007753 | 0.000226 | 0.034998 | 0.851599 |
| hyperlipidemia_times | 0.952757 | 0.917745 | 0.989106 | 0.011297 | 0.000519 | 0.080572 | 0.776524 |
| dabigatran_etexilate_hours_diff_mean | 1.004845 | 0.994896 | 1.014894 | 0.341056 | 0.019277 | 2.990987 | 0.083732 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|-------------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.501045 | 1.293385 | 1.742046 | < 0.0001 | 0.059039 | 9.160009 | 0.002474 |
| age | 1.050612 | 1.045418 | 1.055832 | < 0.0001 | 1.261968 | 195.798219 | < 0.0001 |
| with_psychosis | 1.622731 | 1.355244 | 1.943011 | < 0.0001 | 0.023876 | 3.704422 | 0.054271 |
| hypertension_times | 0.949166 | 0.926235 | 0.972665 | < 0.0001 | 0.010233 | 1.587697 | 0.207658 |
| heart_type_disease_times | 0.997474 | 0.985859 | 1.009226 | 0.672159 | 0.037045 | 5.747577 | 0.016513 |
| neurological_type_disease_times | 1.077390 | 1.065019 | 1.089904 | < 0.0001 | 2.923358 | 453.567900 | < 0.0001 |
| diabetes_times | 1.018675 | 1.004863 | 1.032677 | 0.007896 | 0.000195 | 0.030246 | 0.861934 |
| hyperlipidemia_times | 0.952669 | 0.917673 | 0.988998 | 0.011107 | 0.000510 | 0.079118 | 0.778496 |
| dabigatran_etexilate_hours_diff_max | 1.001555 | 0.994215 | 1.008949 | 0.678886 | 0.004672 | 0.724852 | 0.394559 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|-------------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.498631 | 1.291275 | 1.739284 | < 0.0001 | 0.058209 | 9.031852 | 0.002654 |
| age | 1.050578 | 1.045382 | 1.055800 | < 0.0001 | 1.255176 | 194.755592 | < 0.0001 |
| with_psychosis | 1.622643 | 1.355184 | 1.942888 | < 0.0001 | 0.023811 | 3.694581 | 0.054592 |
| hypertension_times | 0.949240 | 0.926309 | 0.972738 | < 0.0001 | 0.010372 | 1.609268 | 0.204597 |
| heart_type_disease_times | 0.997334 | 0.985732 | 1.009073 | 0.654770 | 0.035421 | 5.496026 | 0.019062 |
| neurological_type_disease_times | 1.077419 | 1.065048 | 1.089933 | < 0.0001 | 2.922602 | 453.476745 | < 0.0001 |
| diabetes_times | 1.018699 | 1.004910 | 1.032678 | 0.007713 | 0.000235 | 0.036496 | 0.848496 |
| hyperlipidemia_times | 0.952773 | 0.917767 | 0.989114 | 0.011307 | 0.000528 | 0.081949 | 0.774674 |
| dabigatran_etexilate_hours_diff_min | 1.008109 | 0.998850 | 1.017454 | 0.086247 | 0.045333 | 7.033927 | 0.007999 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.499504 | 1.292035 | 1.740287 | < 0.0001 | 0.058562 | 9.086313 | 0.002576 |
| age | 1.050591 | 1.045396 | 1.055812 | < 0.0001 | 1.257840 | 195.162371 | < 0.0001 |
| with_psychosis | 1.622640 | 1.355171 | 1.942898 | < 0.0001 | 0.023816 | 3.695141 | 0.054574 |
| hypertension_times | 0.949180 | 0.926246 | 0.972682 | < 0.0001 | 0.010293 | 1.597040 | 0.206326 |
| heart_type_disease_times | 0.997314 | 0.985700 | 1.009065 | 0.652738 | 0.035604 | 5.524189 | 0.018757 |
| neurological_type_disease_times | 1.077450 | 1.065078 | 1.089965 | < 0.0001 | 2.923462 | 453.595085 | < 0.0001 |
| diabetes_times | 1.018711 | 1.004911 | 1.032700 | 0.007722 | 0.000225 | 0.034940 | 0.851722 |
| hyperlipidemia_times | 0.952747 | 0.917735 | 0.989094 | 0.011276 | 0.000519 | 0.080562 | 0.776538 |
| dabigatran_etexilate_hours_diff_median | 1.005422 | 0.995251 | 1.015698 | 0.297258 | 0.021722 | 3.370372 | 0.066381 |

Cilostazol

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|----------|-------------|----------|
| gender | 1.522240 | 1.310196 | 1.768601 | < 0.0001 | 0.051185 | 8.016763 | 0.004635 |
| age | 1.037675 | 1.031968 | 1.043413 | < 0.0001 | 0.184099 | 28.834006 | < 0.0001 |
| with_psychosis | 0.873646 | 0.730902 | 1.044268 | 0.137792 | 0.014918 | 2.336434 | 0.126381 |
| with_hypertension | 1.397128 | 1.123899 | 1.736781 | 0.002596 | 0.141699 | 22.193303 | < 0.0001 |
| with_heart_type_disease | 1.178470 | 0.985909 | 1.408641 | 0.071221 | 0.161496 | 25.293950 | < 0.0001 |
| with_neurological_type_disease | 9.817394 | 8.366335 | 11.520124 | < 0.0001 | 9.357325 | 1465.568575 | < 0.0001 |
| with_diabetes | 0.944883 | 0.800361 | 1.115502 | 0.503244 | 0.000105 | 0.016418 | 0.898044 |
| with_hyperlipidemia | 0.828209 | 0.698308 | 0.982273 | 0.030353 | 0.017495 | 2.740138 | 0.097859 |
| cilostazol | 0.208129 | 0.029234 | 1.481740 | 0.117040 | 0.022772 | 3.566586 | 0.058956 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.504232 | 1.296168 | 1.745694 | < 0.0001 | 0.058982 | 9.151500 | 0.002486 |
| age | 1.050688 | 1.045492 | 1.055909 | < 0.0001 | 1.264707 | 196.227972 | < 0.0001 |
| with_psychosis | 1.626850 | 1.358716 | 1.947899 | < 0.0001 | 0.024151 | 3.747130 | 0.052901 |
| hypertension_times | 0.949277 | 0.926288 | 0.972837 | < 0.0001 | 0.009536 | 1.479504 | 0.223855 |
| heart_type_disease_times | 0.997652 | 0.986104 | 1.009335 | 0.692269 | 0.041268 | 6.403008 | 0.011394 |
| neurological_type_disease_times | 1.076939 | 1.064577 | 1.089445 | < 0.0001 | 2.927310 | 454.192240 | < 0.0001 |
| diabetes_times | 1.019433 | 1.005669 | 1.033385 | 0.005518 | 0.000813 | 0.126165 | 0.722443 |
| hyperlipidemia_times | 0.952958 | 0.918115 | 0.989122 | 0.011229 | 0.000543 | 0.084199 | 0.771686 |
| cilostazol_count | 0.406390 | 0.085054 | 1.941748 | 0.259156 | 0.021856 | 3.391115 | 0.065551 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503957 | 1.295937 | 1.745368 | < 0.0001 | 0.059620 | 9.250354 | 0.002355 |
| age | 1.050675 | 1.045480 | 1.055896 | < 0.0001 | 1.268028 | 196.740622 | < 0.0001 |
| with_psychosis | 1.626177 | 1.358136 | 1.947118 | < 0.0001 | 0.024420 | 3.788840 | 0.051598 |
| hypertension_times | 0.949277 | 0.926307 | 0.972816 | < 0.0001 | 0.010145 | 1.574066 | 0.209620 |
| heart_type_disease_times | 0.997632 | 0.986076 | 1.009322 | 0.689960 | 0.040029 | 6.210755 | 0.012699 |
| neurological_type_disease_times | 1.077030 | 1.064665 | 1.089538 | < 0.0001 | 2.920479 | 453.126462 | < 0.0001 |
| diabetes_times | 1.019167 | 1.005394 | 1.033129 | 0.006240 | 0.000267 | 0.041482 | 0.838610 |
| hyperlipidemia_times | 0.952968 | 0.918080 | 0.989183 | 0.011358 | 0.000631 | 0.097904 | 0.754360 |
| cilostazol_mean | 0.988252 | 0.967801 | 1.009136 | 0.268044 | 0.012784 | 1.983502 | 0.159025 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503957 | 1.295936 | 1.745369 | < 0.0001 | 0.059608 | 9.248501 | 0.002357 |
| age | 1.050675 | 1.045480 | 1.055896 | < 0.0001 | 1.268110 | 196.753637 | < 0.0001 |
| with_psychosis | 1.626147 | 1.358113 | 1.947081 | < 0.0001 | 0.024413 | 3.787801 | 0.051630 |
| hypertension_times | 0.949275 | 0.926304 | 0.972816 | < 0.0001 | 0.010129 | 1.571530 | 0.209988 |
| heart_type_disease_times | 0.997630 | 0.986076 | 1.009320 | 0.689796 | 0.040034 | 6.211452 | 0.012694 |
| neurological_type_disease_times | 1.077022 | 1.064657 | 1.089530 | < 0.0001 | 2.920602 | 453.145972 | < 0.0001 |
| diabetes_times | 1.019203 | 1.005425 | 1.033169 | 0.006162 | 0.000282 | 0.043766 | 0.834291 |
| hyperlipidemia_times | 0.952968 | 0.918084 | 0.989177 | 0.011345 | 0.000637 | 0.098777 | 0.753303 |
| cilostazol_max | 0.988244 | 0.968079 | 1.008830 | 0.260926 | 0.013493 | 2.093554 | 0.147925 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503999 | 1.295975 | 1.745414 | < 0.0001 | 0.059634 | 9.252452 | 0.002352 |
| age | 1.050672 | 1.045478 | 1.055893 | < 0.0001 | 1.267812 | 196.706920 | < 0.0001 |
| with_psychosis | 1.626129 | 1.358090 | 1.947069 | < 0.0001 | 0.024413 | 3.787827 | 0.051629 |
| hypertension_times | 0.949307 | 0.926348 | 0.972834 | < 0.0001 | 0.010187 | 1.580508 | 0.208690 |
| heart_type_disease_times | 0.997634 | 0.986076 | 1.009328 | 0.690316 | 0.039989 | 6.204415 | 0.012745 |
| neurological_type_disease_times | 1.077047 | 1.064682 | 1.089555 | < 0.0001 | 2.920333 | 453.103105 | < 0.0001 |
| diabetes_times | 1.019050 | 1.005295 | 1.032993 | 0.006496 | 0.000243 | 0.037653 | 0.846142 |
| hyperlipidemia_times | 0.952995 | 0.918092 | 0.989224 | 0.011436 | 0.000626 | 0.097156 | 0.755270 |
| cilostazol_min | 0.988436 | 0.967644 | 1.009676 | 0.283606 | 0.011803 | 1.831264 | 0.175981 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503989 | 1.295966 | 1.745404 | < 0.0001 | 0.059622 | 9.250688 | 0.002355 |
| age | 1.050675 | 1.045481 | 1.055896 | < 0.0001 | 1.267992 | 196.735011 | < 0.0001 |
| with_psychosis | 1.626194 | 1.358149 | 1.947140 | < 0.0001 | 0.024419 | 3.788749 | 0.051601 |
| hypertension_times | 0.949274 | 0.926303 | 0.972815 | < 0.0001 | 0.010150 | 1.574754 | 0.209521 |
| heart_type_disease_times | 0.997627 | 0.986071 | 1.009319 | 0.689424 | 0.040011 | 6.207824 | 0.012720 |
| neurological_type_disease_times | 1.077034 | 1.064670 | 1.089542 | < 0.0001 | 2.920393 | 453.112966 | < 0.0001 |
| diabetes_times | 1.019159 | 1.005389 | 1.033118 | 0.006250 | 0.000263 | 0.040820 | 0.839887 |
| hyperlipidemia_times | 0.952972 | 0.918082 | 0.989189 | 0.011369 | 0.000631 | 0.097913 | 0.754349 |
| cilostazol_median | 0.988291 | 0.967868 | 1.009145 | 0.268932 | 0.012569 | 1.950217 | 0.162566 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503836 | 1.295827 | 1.745236 | < 0.0001 | 0.059252 | 9.193318 | 0.002430 |
| age | 1.050691 | 1.045496 | 1.055913 | < 0.0001 | 1.268844 | 196.869006 | < 0.0001 |
| with_psychosis | 1.627494 | 1.359257 | 1.948665 | < 0.0001 | 0.024726 | 3.836400 | 0.050154 |
| hypertension_times | 0.949245 | 0.926250 | 0.972810 | < 0.0001 | 0.009819 | 1.523538 | 0.217087 |
| heart_type_disease_times | 0.997672 | 0.986124 | 1.009355 | 0.694773 | 0.040266 | 6.247587 | 0.012438 |
| neurological_type_disease_times | 1.076931 | 1.064570 | 1.089436 | < 0.0001 | 2.924002 | 453.677061 | < 0.0001 |
| diabetes_times | 1.019408 | 1.005642 | 1.033363 | 0.005588 | 0.000364 | 0.056521 | 0.812082 |
| hyperlipidemia_times | 0.953011 | 0.918160 | 0.989185 | 0.011340 | 0.000578 | 0.089739 | 0.764510 |
| cilostazol_hours_diff_mean | 0.966609 | 0.909897 | 1.026857 | 0.270956 | 0.019069 | 2.958728 | 0.085418 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503944 | 1.295919 | 1.745361 | < 0.0001 | 0.059218 | 9.188134 | 0.002436 |
| age | 1.050693 | 1.045498 | 1.055915 | < 0.0001 | 1.268044 | 196.745918 | < 0.0001 |
| with_psychosis | 1.627412 | 1.359187 | 1.948568 | < 0.0001 | 0.024651 | 3.824825 | 0.050501 |
| hypertension_times | 0.949260 | 0.926266 | 0.972825 | < 0.0001 | 0.009520 | 1.477142 | 0.224225 |
| heart_type_disease_times | 0.997671 | 0.986124 | 1.009354 | 0.694700 | 0.040323 | 6.256323 | 0.012377 |
| neurological_type_disease_times | 1.076920 | 1.064559 | 1.089425 | < 0.0001 | 2.927661 | 454.247123 | < 0.0001 |
| diabetes_times | 1.019424 | 1.005660 | 1.033375 | 0.005541 | 0.000592 | 0.091800 | 0.761902 |
| hyperlipidemia_times | 0.953018 | 0.918172 | 0.989187 | 0.011341 | 0.000582 | 0.090250 | 0.763860 |
| cilostazol_hours_diff_max | 0.970511 | 0.917063 | 1.027074 | 0.300355 | 0.022532 | 3.496014 | 0.061519 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503444 | 1.295499 | 1.744768 | < 0.0001 | 0.059300 | 9.200576 | 0.002420 |
| age | 1.050683 | 1.045487 | 1.055903 | < 0.0001 | 1.267230 | 196.615887 | < 0.0001 |
| with_psychosis | 1.626946 | 1.358786 | 1.948029 | < 0.0001 | 0.024454 | 3.794087 | 0.051436 |
| hypertension_times | 0.949219 | 0.926239 | 0.972769 | < 0.0001 | 0.010115 | 1.569449 | 0.210290 |
| heart_type_disease_times | 0.997647 | 0.986087 | 1.009342 | 0.691990 | 0.039782 | 6.172310 | 0.012978 |
| neurological_type_disease_times | 1.077054 | 1.064693 | 1.089558 | < 0.0001 | 2.922437 | 453.427976 | < 0.0001 |
| diabetes_times | 1.019126 | 1.005361 | 1.033078 | 0.006320 | 0.000204 | 0.031617 | 0.858871 |
| hyperlipidemia_times | 0.952936 | 0.918035 | 0.989163 | 0.011331 | 0.000543 | 0.084191 | 0.771697 |
| cilostazol_hours_diff_min | 0.965191 | 0.901102 | 1.033837 | 0.312167 | 0.009293 | 1.441910 | 0.229833 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.503829 | 1.295822 | 1.745225 | < 0.0001 | 0.059250 | 9.193019 | 0.002430 |
| age | 1.050693 | 1.045497 | 1.055914 | < 0.0001 | 1.268473 | 196.810755 | < 0.0001 |
| with_psychosis | 1.627544 | 1.359297 | 1.948727 | < 0.0001 | 0.024700 | 3.832275 | 0.050277 |
| hypertension_times | 0.949231 | 0.926236 | 0.972797 | < 0.0001 | 0.009917 | 1.538664 | 0.214819 |
| heart_type_disease_times | 0.997677 | 0.986129 | 1.009360 | 0.695414 | 0.040342 | 6.259351 | 0.012355 |
| neurological_type_disease_times | 1.076938 | 1.064576 | 1.089442 | < 0.0001 | 2.922488 | 453.440598 | < 0.0001 |
| diabetes_times | 1.019403 | 1.005638 | 1.033357 | 0.005598 | 0.000300 | 0.046528 | 0.829219 |
| hyperlipidemia_times | 0.952994 | 0.918142 | 0.989169 | 0.011313 | 0.000566 | 0.087872 | 0.766901 |
| cilostazol_hours_diff_median | 0.965884 | 0.908543 | 1.026844 | 0.266298 | 0.016586 | 2.573434 | 0.108674 |

Enoxaparin

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|--------------------------------|-----------|---------------------|---------------------|----------|----------|-------------|----------|
| gender | 1.501027 | 1.291641 | 1.744355 | < 0.0001 | 0.049463 | 7.747017 | 0.005381 |
| age | 1.037766 | 1.032080 | 1.043484 | < 0.0001 | 0.188533 | 29.528355 | < 0.0001 |
| with_psychosis | 0.892494 | 0.746505 | 1.067034 | 0.212027 | 0.013532 | 2.119345 | 0.145452 |
| with_hypertension | 1.413624 | 1.136638 | 1.758109 | 0.001864 | 0.142854 | 22.373999 | < 0.0001 |
| with_heart_type_disease | 1.192093 | 0.996866 | 1.425554 | 0.054158 | 0.159052 | 24.910937 | < 0.0001 |
| with_neurological_type_disease | 9.925097 | 8.458041 | 11.646615 | < 0.0001 | 9.363561 | 1466.534706 | < 0.0001 |
| with_diabetes | 0.933473 | 0.790643 | 1.102104 | 0.416493 | < 0.0001 | 0.004918 | 0.944089 |
| with_hyperlipidemia | 0.830498 | 0.700141 | 0.985125 | 0.033007 | 0.017258 | 2.702915 | 0.100168 |
| enoxaparin | 0.634216 | 0.510726 | 0.787566 | < 0.0001 | 0.017793 | 2.786738 | 0.095050 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.475235 | 1.271091 | 1.712166 | < 0.0001 | 0.057252 | 8.884003 | 0.002877 |
| age | 1.050534 | 1.045362 | 1.055732 | < 0.0001 | 1.271505 | 197.303582 | < 0.0001 |
| with_psychosis | 1.622845 | 1.354743 | 1.944003 | < 0.0001 | 0.029294 | 4.545721 | 0.033003 |
| hypertension_times | 0.949391 | 0.925321 | 0.974087 | < 0.0001 | 0.015247 | 2.365934 | 0.124013 |
| heart_type_disease_times | 1.000675 | 0.989412 | 1.012066 | 0.907013 | 0.040290 | 6.251987 | 0.012407 |
| neurological_type_disease_times | 1.086531 | 1.073414 | 1.099808 | < 0.0001 | 2.987981 | 463.654839 | < 0.0001 |
| diabetes_times | 1.017602 | 1.004258 | 1.031122 | 0.009571 | < 0.0001 | 0.000723 | 0.978544 |
| hyperlipidemia_times | 0.958686 | 0.923875 | 0.994808 | 0.025363 | 0.001112 | 0.172533 | 0.677872 |
| enoxaparin_count | 0.857310 | 0.785273 | 0.935956 | 0.000586 | 0.096478 | 14.970802 | 0.000109 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.500661 | 1.293090 | 1.741553 | < 0.0001 | 0.059293 | 9.199473 | 0.002421 |
| age | 1.050603 | 1.045417 | 1.055814 | < 0.0001 | 1.264396 | 196.173902 | < 0.0001 |
| with_psychosis | 1.627954 | 1.359519 | 1.949392 | < 0.0001 | 0.024334 | 3.775551 | 0.052009 |
| hypertension_times | 0.949623 | 0.926712 | 0.973101 | < 0.0001 | 0.010483 | 1.626531 | 0.202186 |
| heart_type_disease_times | 0.998096 | 0.986515 | 1.009812 | 0.748903 | 0.039791 | 6.173659 | 0.012968 |
| neurological_type_disease_times | 1.078020 | 1.065590 | 1.090595 | < 0.0001 | 2.923377 | 453.568424 | < 0.0001 |
| diabetes_times | 1.018398 | 1.004622 | 1.032363 | 0.008699 | 0.000139 | 0.021503 | 0.883417 |
| hyperlipidemia_times | 0.953596 | 0.918614 | 0.989911 | 0.012712 | 0.000547 | 0.084827 | 0.770860 |
| enoxaparin_mean | 0.998262 | 0.994817 | 1.001720 | 0.324189 | 0.000834 | 0.129332 | 0.719127 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.499645 | 1.292216 | 1.740372 | < 0.0001 | 0.059263 | 9.194847 | 0.002428 |
| age | 1.050594 | 1.045410 | 1.055804 | < 0.0001 | 1.265469 | 196.340567 | < 0.0001 |
| with_psychosis | 1.628205 | 1.359744 | 1.949668 | < 0.0001 | 0.024527 | 3.805455 | 0.051088 |
| hypertension_times | 0.949596 | 0.926666 | 0.973094 | < 0.0001 | 0.010617 | 1.647235 | 0.199338 |
| heart_type_disease_times | 0.998323 | 0.986750 | 1.010031 | 0.777811 | 0.039998 | 6.205710 | 0.012735 |
| neurological_type_disease_times | 1.078605 | 1.066087 | 1.091271 | < 0.0001 | 2.924520 | 453.746405 | < 0.0001 |
| diabetes_times | 1.018350 | 1.004606 | 1.032282 | 0.008721 | 0.000129 | 0.020055 | 0.887383 |
| hyperlipidemia_times | 0.954035 | 0.919065 | 0.990335 | 0.013524 | 0.000573 | 0.088923 | 0.765551 |
| enoxaparin_max | 0.997973 | 0.994735 | 1.001221 | 0.220956 | 0.001836 | 0.284873 | 0.593526 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.501774 | 1.294054 | 1.742836 | < 0.0001 | 0.059308 | 9.201780 | 0.002418 |
| age | 1.050612 | 1.045423 | 1.055826 | < 0.0001 | 1.263601 | 196.050361 | < 0.0001 |
| with_psychosis | 1.627389 | 1.358984 | 1.948804 | < 0.0001 | 0.024208 | 3.755858 | 0.052625 |
| hypertension_times | 0.949775 | 0.926805 | 0.973314 | < 0.0001 | 0.010397 | 1.613176 | 0.204049 |
| heart_type_disease_times | 0.997820 | 0.986237 | 1.009540 | 0.714170 | 0.039659 | 6.153108 | 0.013120 |
| neurological_type_disease_times | 1.077371 | 1.065023 | 1.089862 | < 0.0001 | 2.923130 | 453.529805 | < 0.0001 |
| diabetes_times | 1.018426 | 1.004598 | 1.032443 | 0.008852 | 0.000145 | 0.022467 | 0.880853 |
| hyperlipidemia_times | 0.952926 | 0.917934 | 0.989251 | 0.011533 | 0.000529 | 0.082141 | 0.774417 |
| enoxaparin_min | 0.998754 | 0.995157 | 1.002365 | 0.498375 | 0.000386 | 0.059964 | 0.806554 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.500421 | 1.292879 | 1.741279 | < 0.0001 | 0.059295 | 9.199804 | 0.002421 |
| age | 1.050601 | 1.045415 | 1.055812 | < 0.0001 | 1.264583 | 196.202860 | < 0.0001 |
| with_psychosis | 1.627819 | 1.359418 | 1.949214 | < 0.0001 | 0.024365 | 3.780323 | 0.051861 |
| hypertension_times | 0.949482 | 0.926601 | 0.972928 | < 0.0001 | 0.010501 | 1.629307 | 0.201802 |
| heart_type_disease_times | 0.998163 | 0.986582 | 1.009879 | 0.757428 | 0.039819 | 6.177990 | 0.012936 |
| neurological_type_disease_times | 1.078171 | 1.065712 | 1.090775 | < 0.0001 | 2.923618 | 453.605916 | < 0.0001 |
| diabetes_times | 1.018424 | 1.004669 | 1.032368 | 0.008506 | 0.000138 | 0.021381 | 0.883746 |
| hyperlipidemia_times | 0.953808 | 0.918830 | 0.990117 | 0.013101 | 0.000550 | 0.085322 | 0.770211 |
| enoxaparin_median | 0.998163 | 0.994730 | 1.001609 | 0.295706 | 0.000973 | 0.150968 | 0.697613 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.491842 | 1.285286 | 1.731594 | < 0.0001 | 0.057986 | 8.996974 | 0.002705 |
| age | 1.050676 | 1.045493 | 1.055884 | < 0.0001 | 1.273036 | 197.520197 | < 0.0001 |
| with_psychosis | 1.643668 | 1.372494 | 1.968420 | < 0.0001 | 0.026784 | 4.155674 | 0.041498 |
| hypertension_times | 0.951420 | 0.928383 | 0.975029 | < 0.0001 | 0.011356 | 1.761950 | 0.184384 |
| heart_type_disease_times | 0.997340 | 0.985741 | 1.009075 | 0.655383 | 0.037873 | 5.876306 | 0.015348 |
| neurological_type_disease_times | 1.078730 | 1.066296 | 1.091309 | < 0.0001 | 2.936033 | 455.545700 | < 0.0001 |
| diabetes_times | 1.018015 | 1.004161 | 1.032060 | 0.010652 | 0.000121 | 0.018741 | 0.891112 |
| hyperlipidemia_times | 0.952603 | 0.917690 | 0.988845 | 0.010809 | 0.000648 | 0.100500 | 0.751232 |
| enoxaparin_hours_diff_mean | 0.996821 | 0.993779 | 0.999872 | 0.041178 | 0.021960 | 3.407266 | 0.064913 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.490120 | 1.283911 | 1.729449 | < 0.0001 | 0.058625 | 9.096162 | 0.002562 |
| age | 1.050587 | 1.045408 | 1.055791 | < 0.0001 | 1.269156 | 196.919889 | < 0.0001 |
| with_psychosis | 1.648287 | 1.376388 | 1.973898 | < 0.0001 | 0.026959 | 4.182877 | 0.040837 |
| hypertension_times | 0.952888 | 0.929269 | 0.977107 | 0.000164 | 0.011744 | 1.822117 | 0.177064 |
| heart_type_disease_times | 0.997737 | 0.986209 | 1.009401 | 0.702457 | 0.038579 | 5.985895 | 0.014422 |
| neurological_type_disease_times | 1.079970 | 1.067500 | 1.092585 | < 0.0001 | 2.937862 | 455.833081 | < 0.0001 |
| diabetes_times | 1.017549 | 1.003654 | 1.031636 | 0.013142 | 0.000102 | 0.015777 | 0.900045 |
| hyperlipidemia_times | 0.951665 | 0.916584 | 0.988089 | 0.009731 | 0.000568 | 0.088069 | 0.766647 |
| enoxaparin_hours_diff_max | 0.997191 | 0.994911 | 0.999477 | 0.016037 | 0.027522 | 4.270290 | 0.038787 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.497618 | 1.290302 | 1.738244 | < 0.0001 | 0.058763 | 9.117229 | 0.002533 |
| age | 1.050680 | 1.045490 | 1.055896 | < 0.0001 | 1.266103 | 196.439194 | < 0.0001 |
| with_psychosis | 1.630764 | 1.361810 | 1.952835 | < 0.0001 | 0.024585 | 3.814437 | 0.050815 |
| hypertension_times | 0.950129 | 0.927251 | 0.973571 | < 0.0001 | 0.010478 | 1.625658 | 0.202307 |
| heart_type_disease_times | 0.997270 | 0.985648 | 1.009029 | 0.647603 | 0.038862 | 6.029470 | 0.014071 |
| neurological_type_disease_times | 1.077538 | 1.065152 | 1.090069 | < 0.0001 | 2.924925 | 453.809769 | < 0.0001 |
| diabetes_times | 1.018438 | 1.004609 | 1.032457 | 0.008814 | 0.000153 | 0.023669 | 0.877731 |
| hyperlipidemia_times | 0.952696 | 0.917791 | 0.988928 | 0.010941 | 0.000538 | 0.083479 | 0.772638 |
| enoxaparin_hours_diff_min | 0.998138 | 0.994861 | 1.001426 | 0.266773 | 0.002713 | 0.420970 | 0.516455 |

| | exp(coef) | exp(coef) lower 95% | exp(coef) upper 95% | p | sum_sq | F | PR(>F) |
|---------------------------------|-----------|---------------------|---------------------|----------|----------|------------|----------|
| gender | 1.492568 | 1.285914 | 1.732433 | < 0.0001 | 0.058030 | 9.003759 | 0.002695 |
| age | 1.050686 | 1.045502 | 1.055896 | < 0.0001 | 1.271995 | 197.357360 | < 0.0001 |
| with_psychosis | 1.641476 | 1.370683 | 1.965767 | < 0.0001 | 0.026233 | 4.070137 | 0.043650 |
| hypertension_times | 0.951400 | 0.928335 | 0.975038 | < 0.0001 | 0.011162 | 1.731811 | 0.188183 |
| heart_type_disease_times | 0.997243 | 0.985634 | 1.008989 | 0.644022 | 0.037960 | 5.889746 | 0.015231 |
| neurological_type_disease_times | 1.078309 | 1.065907 | 1.090855 | < 0.0001 | 2.933167 | 455.097862 | < 0.0001 |
| diabetes_times | 1.018058 | 1.004182 | 1.032125 | 0.010589 | 0.000128 | 0.019929 | 0.887735 |
| hyperlipidemia_times | 0.952404 | 0.917473 | 0.988666 | 0.010533 | 0.000629 | 0.097668 | 0.754647 |
| enoxaparin_hours_diff_median | 0.997011 | 0.993940 | 1.000092 | 0.057222 | 0.017069 | 2.648415 | 0.103656 |

(資料來源：https://mimic-iv-drug-data-analysis-0--introduction-uwuting.streamlit.app/Cox_PH_Model)