## Supplementary Data

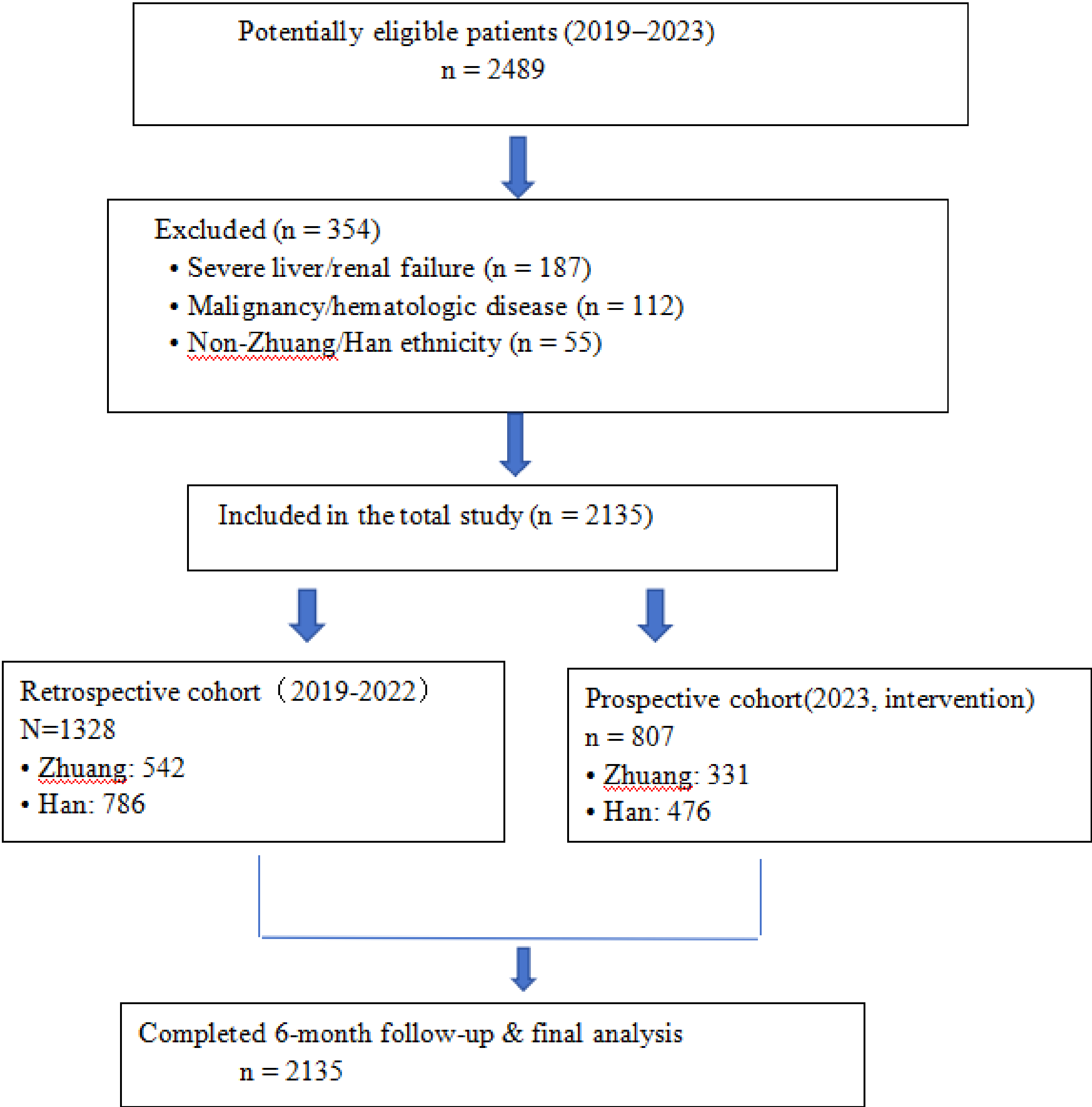


**Fig. S1**: Flow chart.

STROBE Statement—checklist of items that should be included in reports of observational studies

| | Item No. | Recommendation | Page No. | Relevant text from manuscript |
|---|---|---|---|---|
| Title and abstract | 1 | (*a*) Indicate the study's design with a commonly used term in the title or the abstract | 1 | Abstract: "A retrospective analysis included 2135 elderly ICVD patients (873 Zhuang, 1262 Han) from 2019–2022; 807 patients received a prospective stratified regimen (2023)." |
| | | (*b*) Provide in the abstract an informative and balanced summary of what was done and what was found | 1 | Abstract: Objectives, Methods, Results, Conclusion fully summarized. |
| Introduction | | | | |
| Background/rationale | 2 | Explain the scientific background and rationale for the investigation being reported | 2-3 | INTRODUCTION: Guangxi ICVD incidence, ethnic genetic differences, drug accessibility, monitoring gap. |
| Objectives | 3 | State specific objectives, including any prespecified hypotheses | 1 | Abstract: "To explore combined medication characteristics and optimize regimens for elderly ICVD patients in Guangxi, focusing on ethnic genetic differences and drug interactions." |
| Methods | | | | |
| Study design | 4 | Present key elements of study design early in the paper | 3 | MATERIALS AND METHODS: "A two-stage design of 'case-control + prospective cohort' was adopted: Phase I (case review: 2019–2022); Phase II (cohort verification: 2023)." |
| Setting | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection | 3 | "2019–2022 retrospective; 2023 prospective; Beihai Traditional Chinese Medicine Hospital; follow-up at 3 and 6 months." |
| Participants | 6 | (*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up<br>*Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls<br>*Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants | 4 | Inclusion: age ≥60, acute cerebral infarction, ≥2 antithrombotics ≥3 months, Zhuang/Han, no interethnic marriage 3 generations, informed consent. Exclusion: severe liver failure, CrCl <30 mL/min, |

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| | | | | malignancy/hematologic disease. Follow-up: 3/6 months outpatient + MRI if suspected recurrence. |
| | | (*b*) *Cohort study*—For matched studies, give matching criteria and number of exposed and unexposed<br>*Case-control study*—For matched studies, give matching criteria and the number of controls per case | - | Not applicable; non-matched retrospective + prospective cohort. |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable | 4-5 | Outcomes: stroke recurrence (new deficit + DWI+), severe bleeding (ISTH), platelet inhibition rate, NIHSS/mRS. Predictors: CYP2C19 genotype, ethnicity, age, liver/kidney function, medication. |
| Data sources/ measurement | 8* | For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group | 5 | CYP2C19: ARMS-PCR. Platelet function: Chrono-Log 700, ADP 20 μmol/L, 8–10am fasting. Imaging: blinded 2 radiologists + 3rd arbitrator. |
| Bias | 9 | Describe any efforts to address potential sources of bias | 3 | "Confounding factors (age, gender, comorbidities, lifestyle) controlled via stratified analysis, multivariate regression; blinded imaging reading." |
| Study size | 10 | Explain how the study size was arrived at | 3 | Retrospective: 2135 consecutive elderly ICVD patients (873 Zhuang, 1262 Han) enrolled 2019–2022; a subset of 1328 patients were included in Table 1 baseline comparison. Prospective: 807 consecutive patients enrolled 2023; no formal sample size calculation stated. |

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| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why | 6 | Age: ≤70 vs >70; NIHSS: ≤8 vs >8; CYP2C19: fast (*1/*1), intermediate (*1/*2/*3), slow (*2/*2/*3/*3). |
| Statistical methods | 12 | (*a*) Describe all statistical methods, including those used to control for confounding | 6 | Chi-square, t-test, stratified analysis, multivariate regression; HR for recurrence, OR for genotype resistance. |
| | | (*b*) Describe any methods used to examine subgroups and interactions | 6 | Subgroups: age, NIHSS, ethnicity, CYP2C19 genotype. |
| | | (*c*) Explain how missing data were addressed | - | Not explicitly stated; assumed complete case analysis. |
| | | (*d*) *Cohort study*—If applicable, explain how loss to follow-up was addressed<br>*Case-control study*—If applicable, explain how matching of cases and controls was addressed<br>*Cross-sectional study*—If applicable, describe analytical methods taking account of sampling strategy | - | Not explicitly stated; follow-up completed for all enrolled. |
| | | (*e*) Describe any sensitivity analyses | - | Not performed. |
| **Results** | | | | |
| Participants | 13* | (a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed | 7 | Retrospective: 2135 eligible → 2135 included (873 Zhuang, 1262 Han); 1328 included in Table 1. Prospective: 807 eligible → 807 included. All completed follow-up. |
| | | (b) Give reasons for non-participation at each stage | - | No non-participation stated; consecutive enrollment. |
| | | (c) Consider use of a flow diagram | - | See Figure S1 below. |
| Descriptive data | 14* | (a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders | 7 | Table 5: age, gender, hypertension, medication count by ethnicity. Table 1: retrospective (1328) vs intervention (807) baseline. |
| | | (b) Indicate number of participants with missing data for each variable of interest | - | No missing data reported. |
| | | (c) *Cohort study*—Summarise follow-up time (eg, average and total amount) | 4 | Fixed follow-up: 3 months, 6 months for all participants. |
| Outcome data | 15* | *Cohort study*—Report numbers of outcome events or summary measures over time | 8 | Table 7: 6-month recurrence (8.3% vs 15.7%), severe bleeding (5.1% vs 9.8%). Table 8: platelet inhibition at 1/3 months. |
| | | *Case-control study*—Report numbers in each exposure category, or summary measures of exposure | - | - |
| | | *Cross-sectional study*—Report numbers of outcome events or summary measures | - | - |
| Main results | 16 | (*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision | 9 | Unadjusted: Table 7–9. Adjusted: |

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| | | (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included | | OR=2.56 (95% CI:1.89–3.48) for CYP2C19*3; adjusted for compliance, comorbidities. |
| | | (*b*) Report category boundaries when continuous variables were categorized | 6 | Age: 70 years; NIHSS: 8 points; eGFR: 30/60 mL/min; Child-Pugh: A/B/C. |
| | | (*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period | 8 | 6-month recurrence: intervention 8.3% vs control 15.7% (absolute reduction 7.4%). |

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| Other analyses | 17 | Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses | 9 | Age-stratified efficacy (≤70:84.2% vs >70:72.1%); multivariate regression with compliance/comorbidities. |
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| **Discussion** | | | | |
| Key results | 18 | Summarise key results with reference to study objectives | 10 | "Zhuang had higher CYP2C19*3 and clopidogrel resistance; stratified regimen reduced recurrence/bleeding and improved efficacy." |
| Limitations | 19 | Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias | 12 | Excluded severe liver/renal failure; no CYP2C19*17; short 6-month follow-up; unmeasured confounders (lifestyle, SES). |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence | 11 | "Ethnic-specific CYP2C19 distribution supports precision dosing; genotype + function testing needed; interactions with PPIs critical." |
| Generalisability | 21 | Discuss the generalisability (external validity) of the study results | 12 | "Limited to Guangxi elderly ICVD (Zhuang/Han); not generalizable to severe organ failure or other ethnicities." |
| **Other information** | | | | |
| Funding | 22 | Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based | 13 | "Funding: Guangxi Zhuang Autonomous Region Traditional Chinese Medicine Administration Self-raised Funds Research Project (No. GXZYA20240166)." |

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

**Note:** An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.