Anticoagulation Safety and Thromboembolic Outcomes in Patients With Chronic Lymphocytic Leukemia and Atrial Fibrillation Receiving BTK Inhibitors

A Propensity-Matched TriNetX Analysis • CLL-1309

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INTRODUCTION

- BTK inhibitors improve outcomes in CLL/SLL but are associated with bleeding and treatment-emergent atrial fibrillation.
- AF often creates an indication for anticoagulation, while BTKi therapy simultaneously increases hemorrhagic risk.
- Real-world evidence evaluating anticoagulation safety in this specific population remains limited.

AIM

Evaluate the safety and clinical outcomes of anticoagulation versus no anticoagulation in adults with CLL/SLL and AF receiving BTKi therapy.

METHODOLOGY

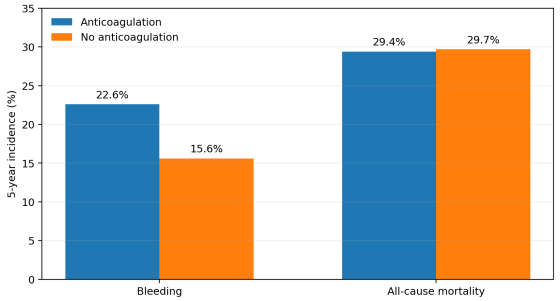
- Retrospective propensity score–matched cohort study.
- TriNetX federated research network: 112 healthcare organizations.
- Adults with CLL/SLL + AF receiving ibrutinib, acalabrutinib, or zanubrutinib.
- Exposure: warfarin or DOAC anticoagulation vs no anticoagulation.
- Excluded: mechanical valves, prior VTE as primary anticoagulation indication, pregnancy, and type 1 diabetes.
- Matching included cardiovascular and bleeding risk factors.
- Outcomes assessed up to 5 years after index.

CLL/SLL + AF + BTKi → Anticoagulation vs none → Propensity matching → 5-year outcomes

554 matched patients in each cohort

RESULTS

554 vs 554 PROPENSITY-MATCHED PATIENTS



BLEEDING

22.6% vs 15.6%

RR 1.45 • OR 1.58 • P=0.011

MORTALITY

29.4% vs 29.7%

RR 0.99 • OR 0.99 • P=0.915

Bleeding was significantly more frequent with anticoagulation.

BLEEDING EVENTS INCLUDED

Intracranial hemorrhage • gastrointestinal bleeding • epistaxis • hematuria • hemoptysis • other major hemorrhagic events

Thromboembolic outcomes (ischemic stroke, TIA, PE, DVT, arterial embolism) were evaluated; the abstract does not report comparative event estimates.

CONCLUSION

Anticoagulation increased bleeding risk without reducing all-cause mortality.

- Significantly higher bleeding incidence with anticoagulation.
- No significant difference in all-cause mortality.
- Management requires individualized balancing of thromboembolic prevention against BTKi-related hemorrhagic risk.

KEY TAKE-HOME

CLL/SLL + AF + BTKi

Anticoagulation decisions should integrate stroke risk, bleeding history, concomitant antiplatelet therapy, renal/liver function, and the bleeding profile of the BTKi.

REFERENCES

1. Ossai J, et al. Anticoagulation Safety and Thromboembolic Outcomes in Patients With CLL and AF Receiving BTK Inhibitors: A Propensity-Matched TriNetX Analysis. CLL-1309.

2. TriNetX federated research network.

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