IMPROVED LONG-TERM OUTCOMES IN AL AMYLOIDOSIS FOLLOWING ADOPTION OF DARATUMUMAB-BASED THERAPY: A MULTI-INSTITUTIONAL REAL-WORLD STUDY

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INTRODUCTION

Daratumumab-based therapy has transformed treatment of light-chain (AL) amyloidosis following the ANDROMEDA trial, though real-world longitudinal outcomes in the modern therapeutic era remain incompletely defined..

AIM

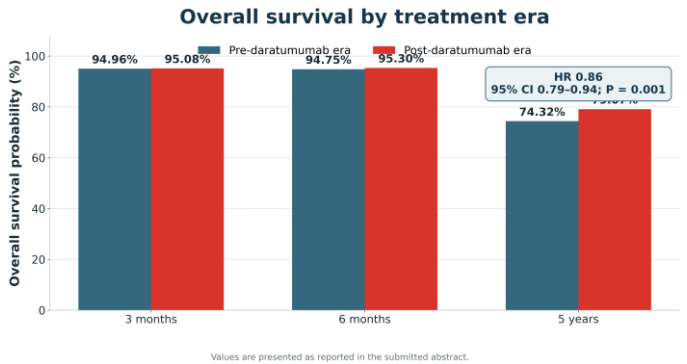
To evaluate temporal trends in survival, healthcare utilization, and organ-related complications among patients with AL amyloidosis before and after adoption of daratumumab-based therapy..

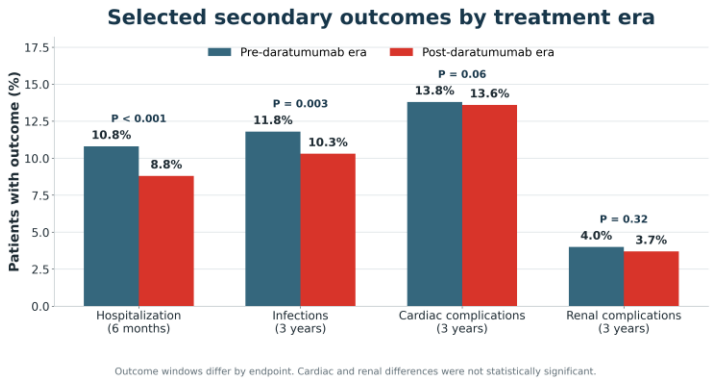
METHOD

- **We conducted a retrospective cohort study using the TriNetX federated electronic health record network, comprising 111 healthcare organizations.**
- **Adults with AL amyloidosis (ICD-10-CM E85.8 or E85.81) were categorized into pre-daratumumab (2015–2019) and post-daratumumab (2021–2024) eras.**
- **Propensity score matching was used to balance baseline demographic, clinical, and laboratory characteristics.**
- **The primary outcome was overall survival. Secondary outcomes included healthcare utilization, infections, cardiac complications, renal complications, and a clinical severity index. Outcomes were assessed from 1 day through 5 years after diagnosis..**

RESULTS

Cohorts: 26,292 patients; pre-daratumumab, n = 10,119; post-daratumumab, n = 16,173.
OS, pre vs post: 3 months, 94.96% vs 95.08%; 6 months, 94.75% vs 95.30%; 5 years, 74.32% vs 79.07% (HR, 0.86; 95% CI, 0.79–0.94; P = 0.001).
Complications at 3 years: infections, 11.8% vs 10.3% (P = 0.003); cardiac, 13.8% vs 13.6% (HR, 0.89; P = 0.06); renal, 4.0% vs 3.7% (HR, 0.92; P = 0.32).





CONCLUSIONS

The post-daratumumab era was associated with improved long-term survival and reductions in hospitalization and infectious complications among patients with AL amyloidosis.

Cardiac and renal complications remained substantial and did not differ significantly between eras.

Because this was an era-based observational comparison, the findings demonstrate association rather than a treatment-specific causal effect.

Earlier diagnosis, optimized supportive care, and prospective studies evaluating treatment-specific outcomes remain necessary.

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