

INTRODUCTION

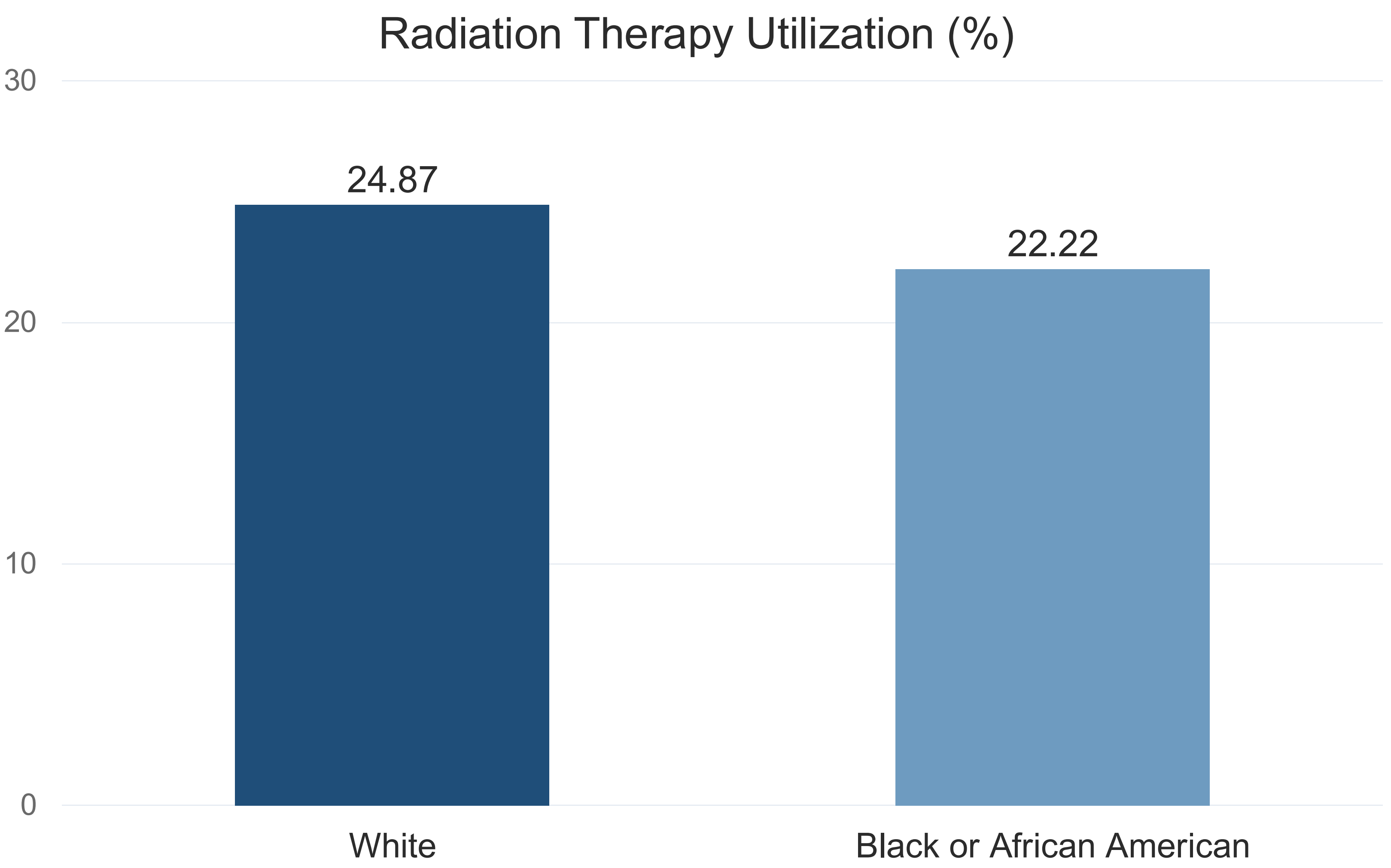
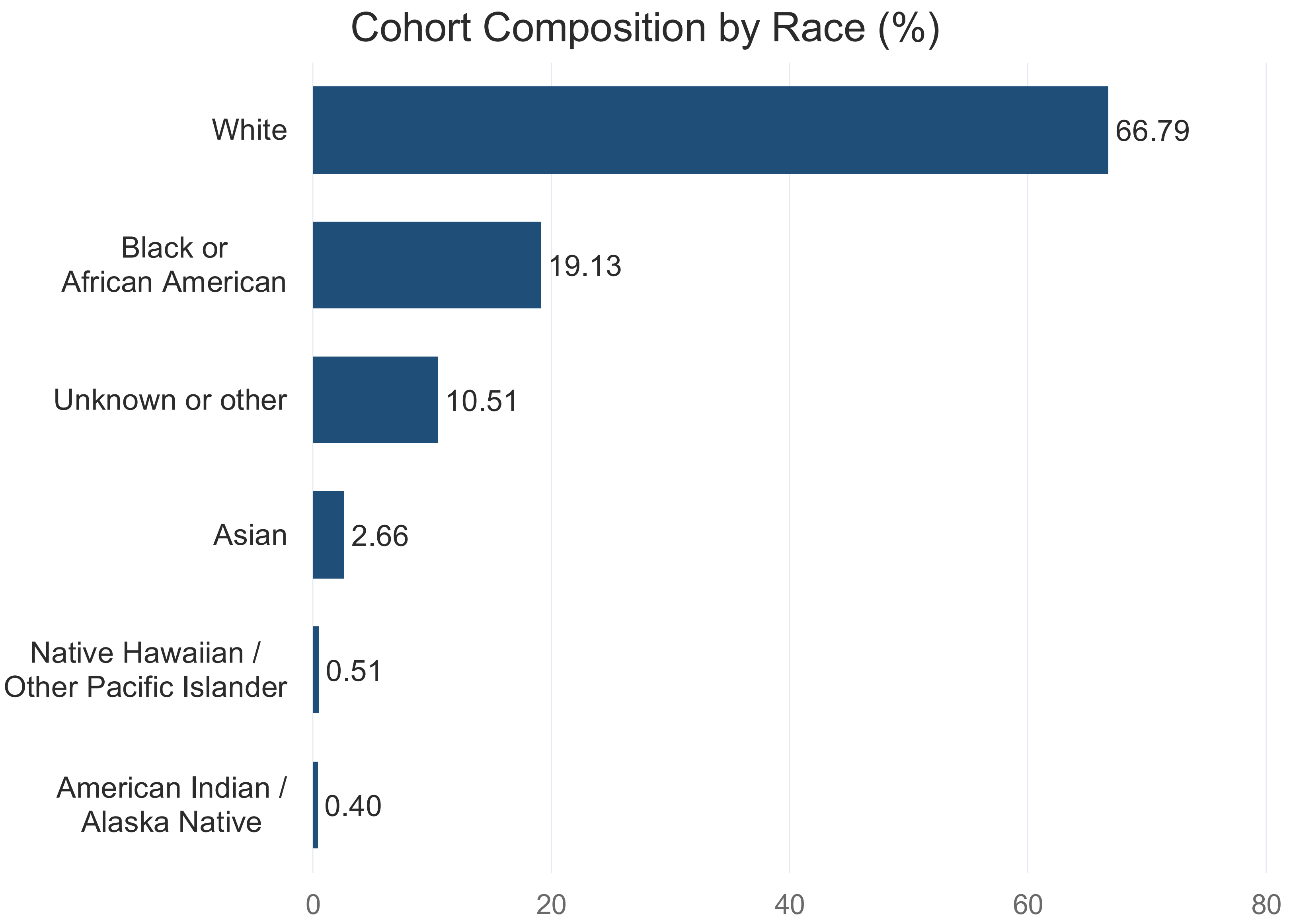
- Bone metastasis is a common complication of multiple myeloma (MM) and often benefits from radiation therapy (RT).
- Racial disparities in MM outcomes are well established, but differences in RT utilization across racial and ethnic groups remain incompletely understood.
- We evaluated real-world RT utilization among patients with MM and bone metastasis, stratified by race and ethnicity.

METHODS

- **Design:** Retrospective cohort study using TriNetX, a federated network of de-identified electronic medical records from US institutions.
- **Period:** January 2016 to March 2026.
- **Population:** Adults ≥18 years with MM and bone metastasis; patients receiving RT before January 2016 were excluded.
- **Comparisons:** Patients stratified by race and ethnicity, with White patients as the reference group.
- **Matching:** Propensity-score matching to balance baseline characteristics and reduce confounding.

COHORT

- 25,048 patients with MM and bone metastasis were included.
- Mean age 73 ± 12 years; 56.5% male.
- Predominantly White (66.79%), followed by Black or African American (19.13%) and Asian (2.66%).
- Most patients were not Hispanic or Latino (74.83%); 5.71% were Hispanic or Latino.



White patients had higher RT utilization than Black patients: RR 1.12 (P = 0.012).

RESULTS

Comparison	RT utilization
White vs Black or African American	RR 1.12; P value = 0.012
Non-Hispanic vs Hispanic	RR 1.30; P value = 0.001

Reference groups: White (race) and non-Hispanic (ethnicity). RR = risk ratio.

No significant differences in RT utilization were observed between White patients and Asian, Native Hawaiian or Other Pacific Islander, or American Indian or Alaska Native patients.

CONCLUSIONS

- Black and Hispanic patients were significantly less likely to receive RT than White and non-Hispanic patients, indicating a measurable disparity.
- These findings highlight the need to investigate systemic and access-related factors driving unequal utilization of radiation services.

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