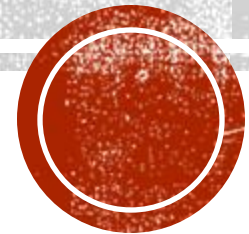


LANDMARK STUDY

Effect of Treating Hyperphosphatemia With Lanthanum Carbonate
vs Calcium Carbonate on Cardiovascular Events in Patients With
Chronic Kidney Disease Undergoing Hemodialysis

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POPULATION

1271 Men
864 Women



Adults with CKD,
hyperphosphatemia, and ≥ 1
vascular calcification risk factor

Median age: 69 years

OPEN-LABELLED, END- POINT BLINDED, RANDOMIZED CONTROLLED TRIAL

LOCATIONS

273

Hemodialysis
facilities in Japan



INTERVENTION



1063

Lanthanum carbonate

750 mg/d oral lanthanum
carbonate (3 doses, 250 mg
each, after meals) or previously
prescribed dose

2309 Patients randomized

2135 Patients analyzed



1072

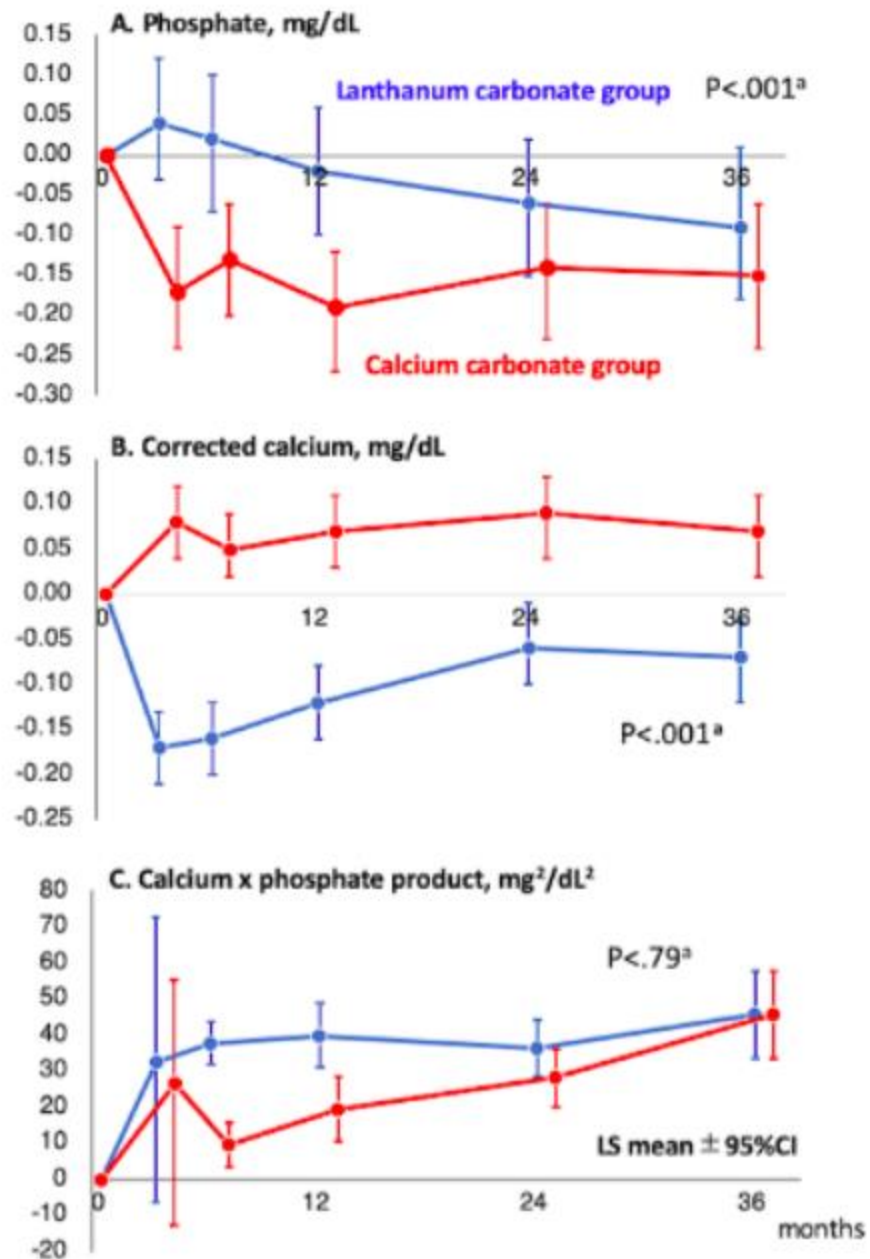
Calcium carbonate


3000 mg/d oral calcium
carbonate (3 doses, 1000 mg
each, after meals) or previously
prescribed dose


PRIMARY OUTCOME


Composite of cardiovascular events: cardiovascular death,
nonfatal myocardial infarction or stroke, unstable angina, TIA,
or hospitalization for heart failure or ventricular arrhythmia



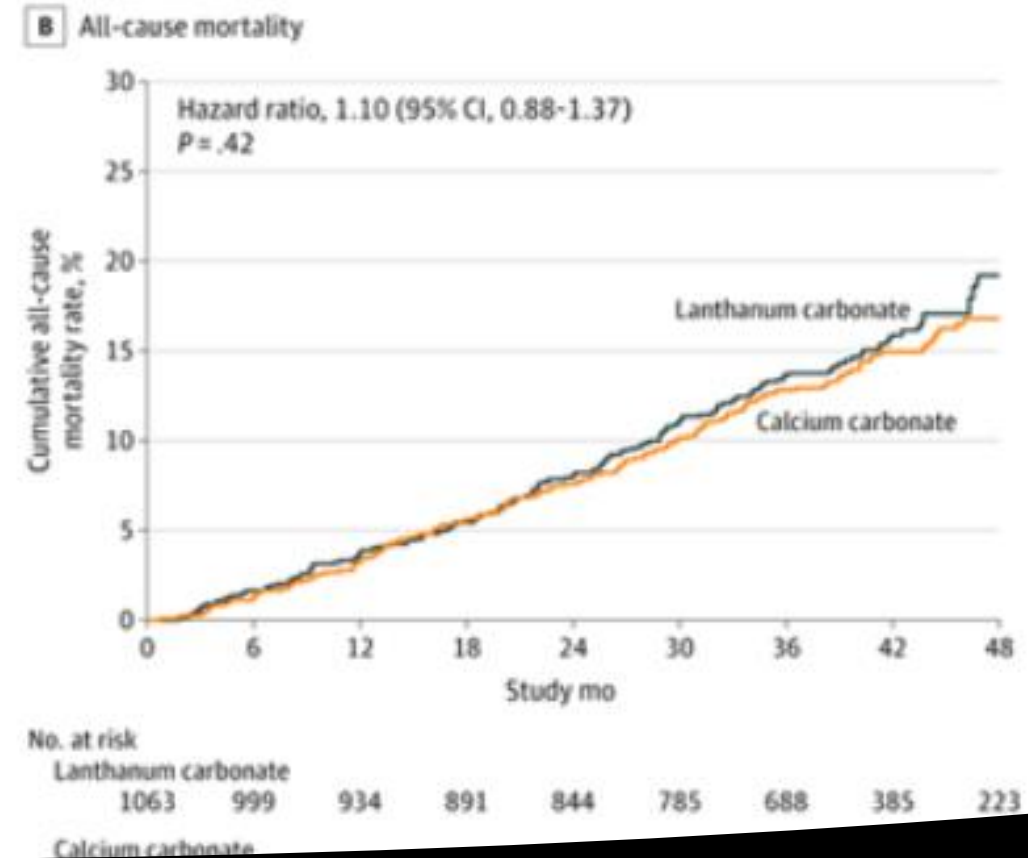
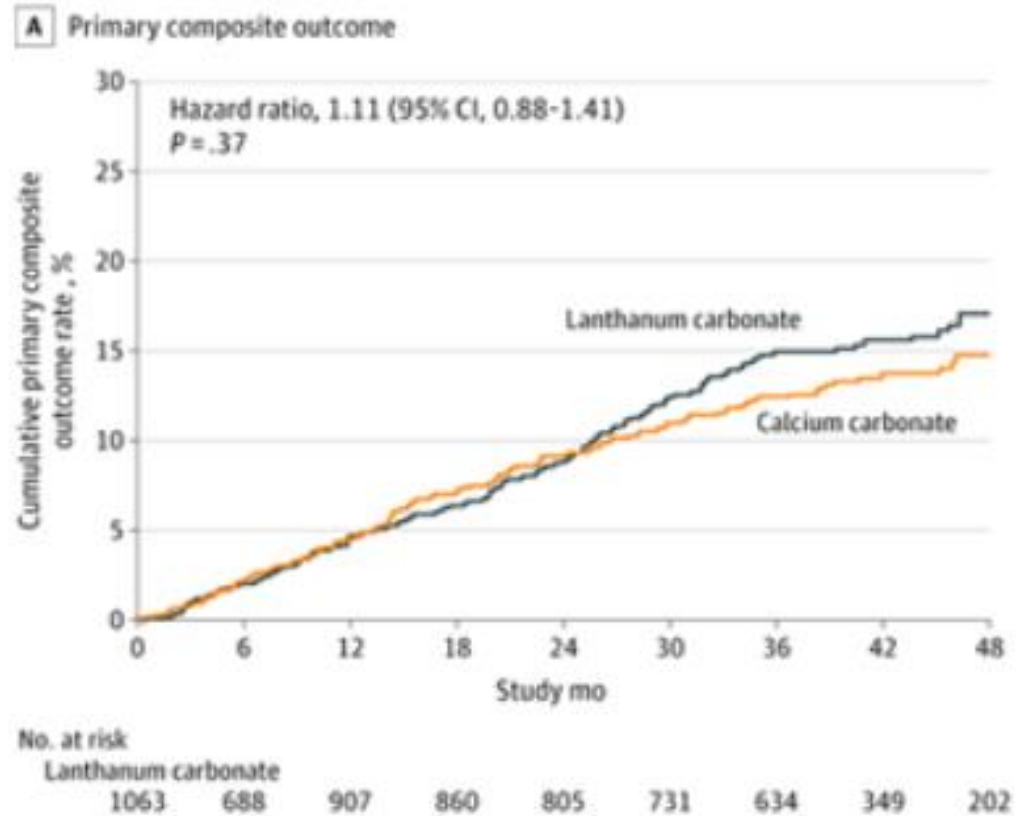


 Serum phosphate levels decreased *significantly more* in the calcium carbonate group ($p < 0.001$)

 Serum calcium levels *increased* more in the calcium carbonate ($p < 0.001$)

 Calcium \times phosphate product *increased* in both groups, but the difference was *not statistically significant*





- No significant difference in the composite CV endpoint between the two groups.
- No difference in all cause mortality between the two groups.



CONCLUSION

**Treatment of
hyperphosphatemia
with Lanthanum
carbonate did not
reduce composite
cardiovascular events**

FINDINGS

© AMA

Incident rate of composite cardiovascular events

Lanthanum carbonate

4.8 events per 100 person-years
(147 of 1063 patients)

Calcium carbonate

4.3 events per 100 person-years
(134 of 1072 patients)

The findings were not significant:

Difference, **0.5** events per 100 person-years
(95% CI, -0.57 to 1.56)

Hazard ratio, **1.11**
(95% CI, 0.88 to 1.41) $P = .37$

