

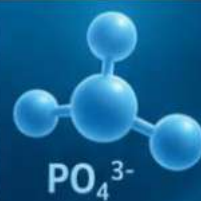


COMPARISON OF PHOSPHATE BINDERS

Choosing the right binder in CKD-MBD

KIDNEY → PHOSPHATE → INTESTINE

LOWER PHOSPHATE. BRIGHTER TOMORROWS.



CALCIUM ACETATE

Calcium-based

- ✓ Effective phosphate lowering
- ✓ Moderate pill burden
- ⚠ **Hypercalcaemia • Calcium loading**
- Best fit:** Low/normal calcium; cost-conscious use



SEVELAMER CARBONATE

Calcium-free

- ✓ No calcium load • Lowers LDL
- ⚠ **High pill burden • GI intolerance**
- Best fit:** Hypercalcaemia or vascular calcification



LANTHANUM CARBONATE

Calcium-free

- ✓ Potent • Lower pill burden
- ⚠ **Nausea/abdominal pain**
- Chew completely; caution in severe GI disease



FERRIC CITRATE

Iron-based • Calcium-free

- ✓ Raises iron stores
- ⚠ **Diarrhoea • Dark stools • Iron loading**
- Monitor ferritin and TSAT



SUCROFERRIC OXYHYDROXIDE

Iron-based • Calcium-free

- ✓ Potent • Low pill burden
- ⚠ **Diarrhoea • Dark stools**
- Chew with meals; monitor iron status



INDIVIDUALIZE THE BINDER

Consider serum calcium, PTH, vascular calcification, iron status, GI tolerance, interactions and pill burden.



Use with meals. Treat progressively or persistently elevated phosphate.
Restrict calcium-based binder dose in adults with CKD G3a–G5D.



HEALTHIER
KIDNEYS
BRIGHTER
FUTURES



RECENT TRIALS IN PHOSPHATE CONTROL



1



HiLo • 2025

- HD patients: target ≥ 6.5 vs < 5.5 mg/dL
- Stopped early — outcome benefit remains uncertain

2



OPTIMIZE • 2024

- Tenapanor $\pm$ phosphate binders
- Phosphate ≤ 5.5 mg/dL in 34–38%
- Lower pill burden

3



AP306 • 2025

- Phosphate-transporter inhibitor vs sevelamer
- Greater phosphate reduction
- Diarrhoea: common adverse effect

4



OXYLANTHANUM CARBONATE • 2025

- $>90\%$ achieved phosphate ≤ 5.5 mg/dL
- Two-thirds required ≤ 3 tablets/day

5



FERRIC CITRATE • 2024

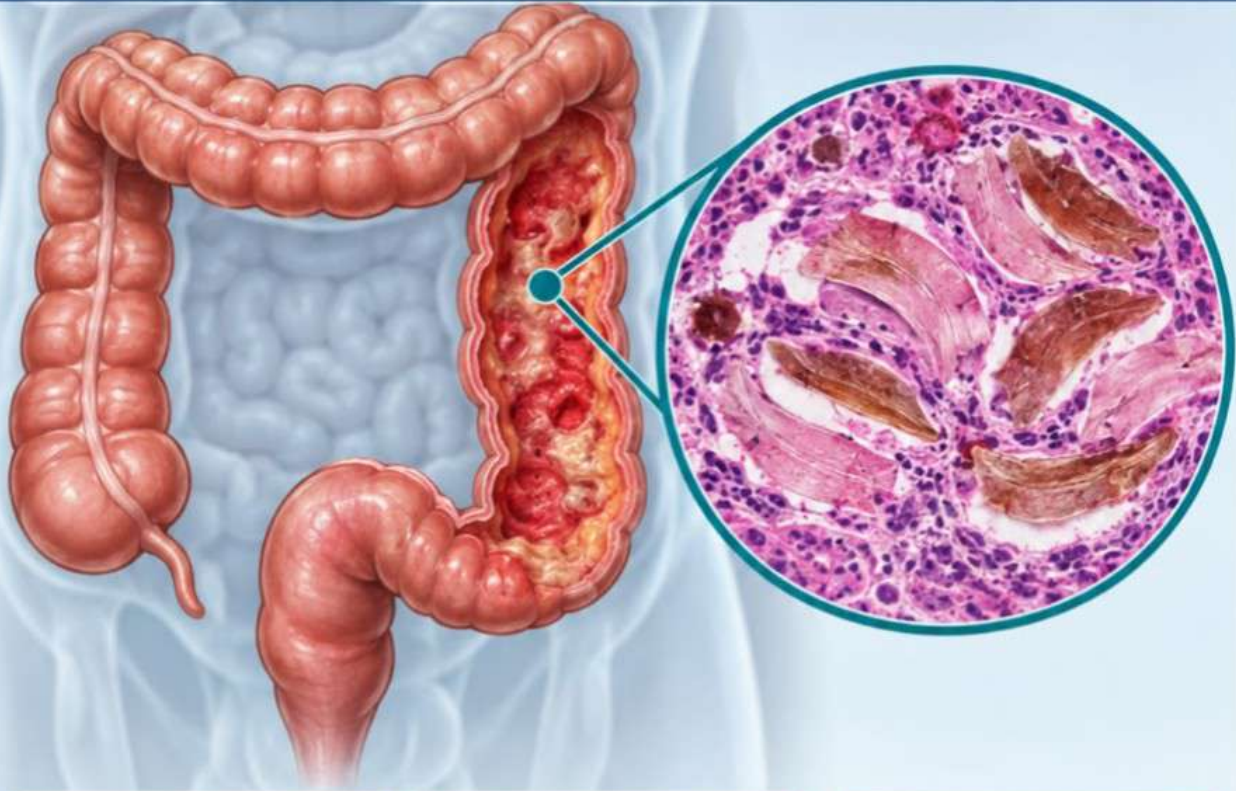
- Reduced ESA requirement
- Improved Hb, TSAT and ferritin



KEY MESSAGE

- Better phosphate control and lower pill burden
- Survival and cardiovascular benefit remain unproven

SEVELAMER-ASSOCIATED COLONIC MUCOPATHY



CLINICAL CLUES

Abdominal pain • Constipation
Hematochezia • Anaemia



HISTOLOGY

Broad, curved, irregular
'fish-scale' crystals



May cause:

Ulceration • Ischemia • Necrosis
Stricture • Obstruction • Perforation



KEY ACTION

Stop sevelamer and use an
alternative phosphate binder



Clinical Pearl

In a dialysis patient with unexplained
GI bleeding, ask the pathologist to
look for sevelamer crystals.