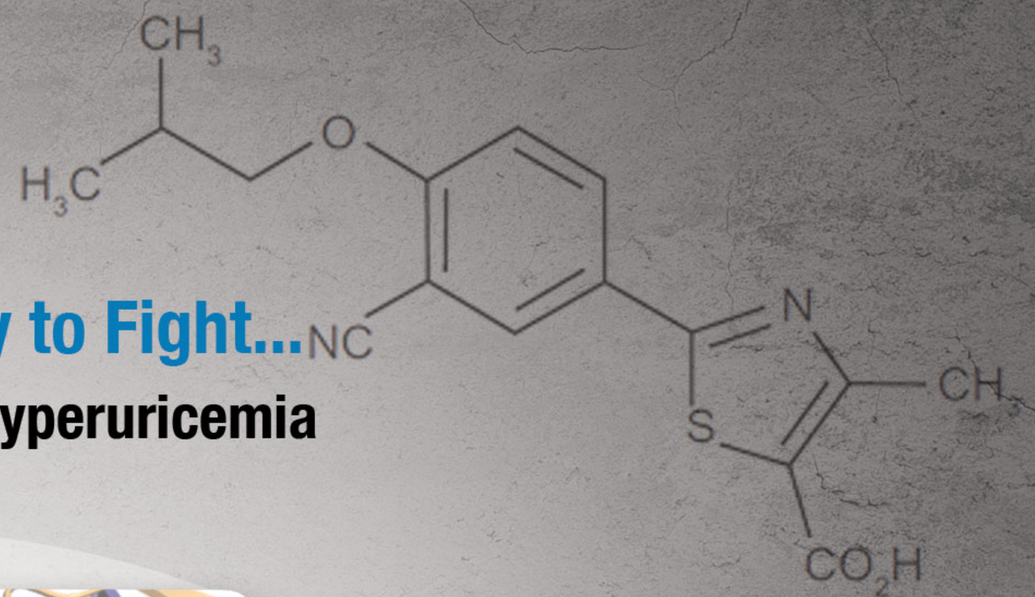
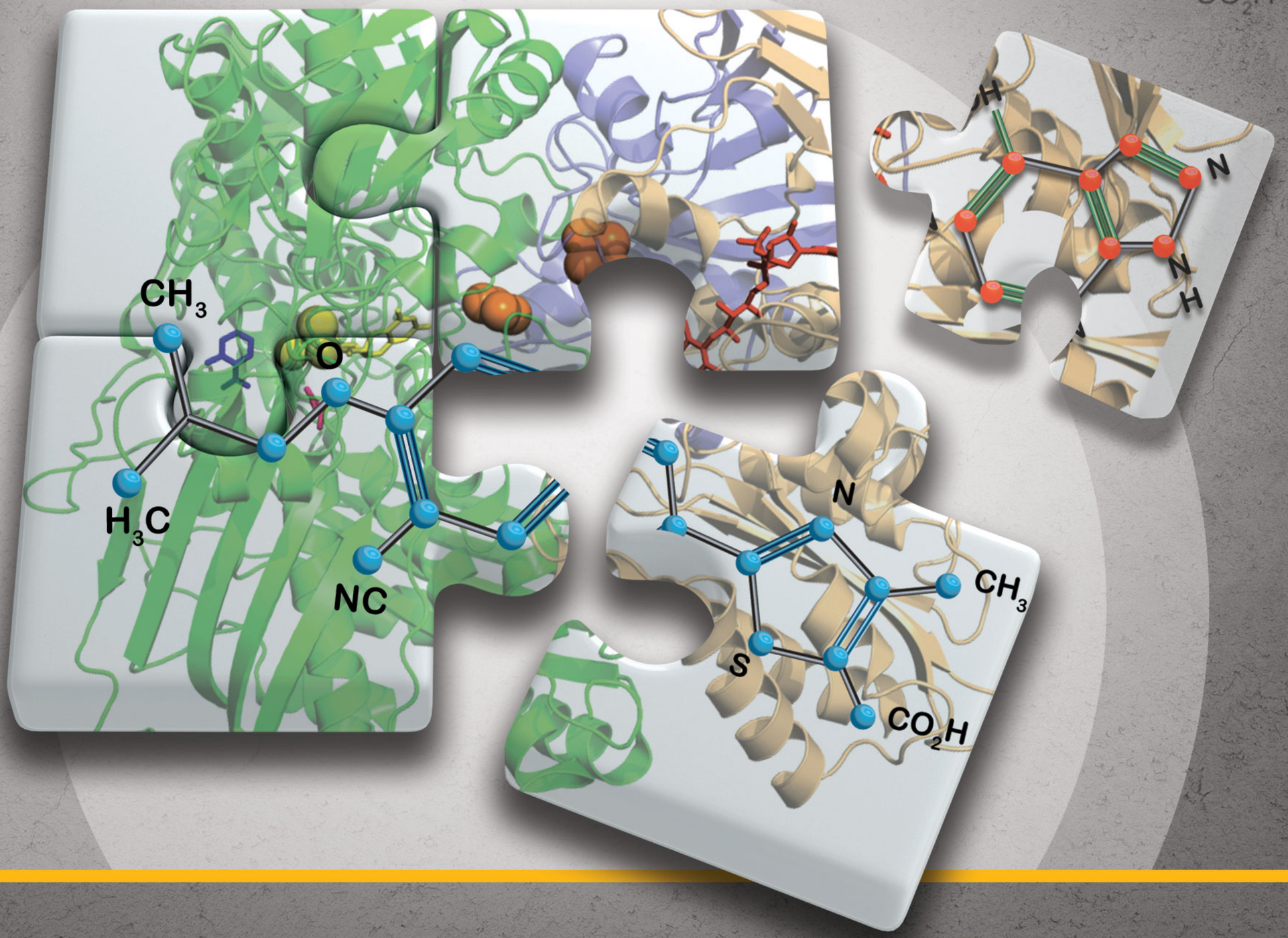
FEBiX®

Febuxostat



Febuxostat, the Fabulous Way to Fight...

A Novel Agent for Management of Hyperuricemia



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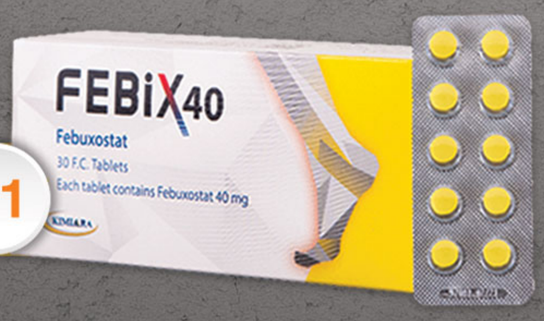

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Urate-lowering therapy for CKD stage 3, patients with asymptomatic hyperuricemia[1]

FEATHER Study

A multicenter, randomized, double-blind, parallel-group, placebo-controlled, prospective cohort study in Japan

Study Design

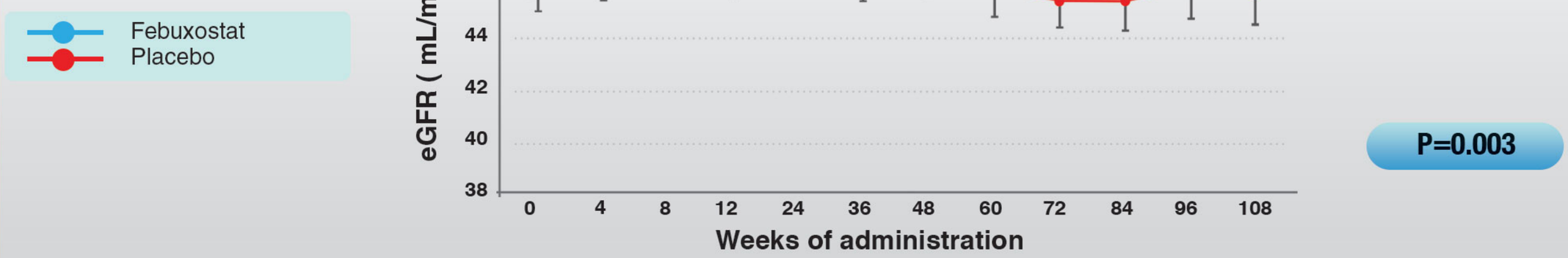
Total 395
Stage 3 CKD pts with hyperuricemia

- Mean age, 64.7 years
- Mean eGFR, 45.2 mL/min/1.73 m2
- Hyperuricemia, SUA > 7.0–10.0 mg/dL

Follow up for 108 weeks

- Febuxostat pts (n = 192)
  VS.
- Placebo (n = 203)

Time-course changes in the estimated glomerular filtration rates (eGFRs) from week 0 through week 108 of treatment.



P=0.003

Febuxostat mitigated the decline in kidney function among stage 3 CKD patients with asymptomatic hyperuricemia

Comparison of uric acid reduction of febuxostat vs allopurinol in patients with chronic kidney disease & hyperuricemia [2]

A propensity score-matched cohort study

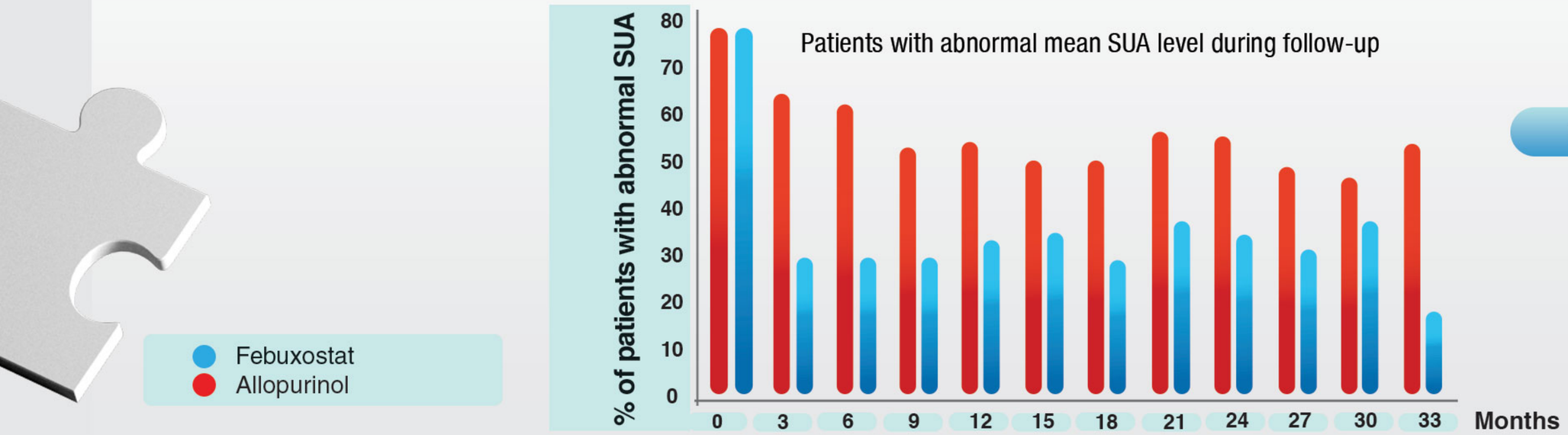
Study Design

Total 1050
CKD pts with hyperuricemia

- Mean aged ≥18 years
- Mean eGFR ≥ 15 mL/min/1.73 m2
- Hyperuricemia, SUA> 7.0–10.0 mg/dL

Follow up for 2.5 years

- Febuxostat pts (n = 525)
  VS.
- Allopurinol (n = 525)



P < 0.05

- ***These results suggest that febuxostat was superior to allopurinol on sustained reduction in SUA achieving <6 mg/dL in patients with CKD especially in the early phase of therapy.***
- ***The present study supports that febuxostat new users lead to a more rapid reduction in SUA level and likely sustain targeted SUA treatment goal over time than allopurinol new users.***

Comparison prognostic effects of febuxostat and allopurinol uric acid-lowering therapy in patients with chronic heart failure and hyperuricemia[3]

Study Design

A Multicenter, randomized trial

Total 263
CHF pts with hyperuricemia

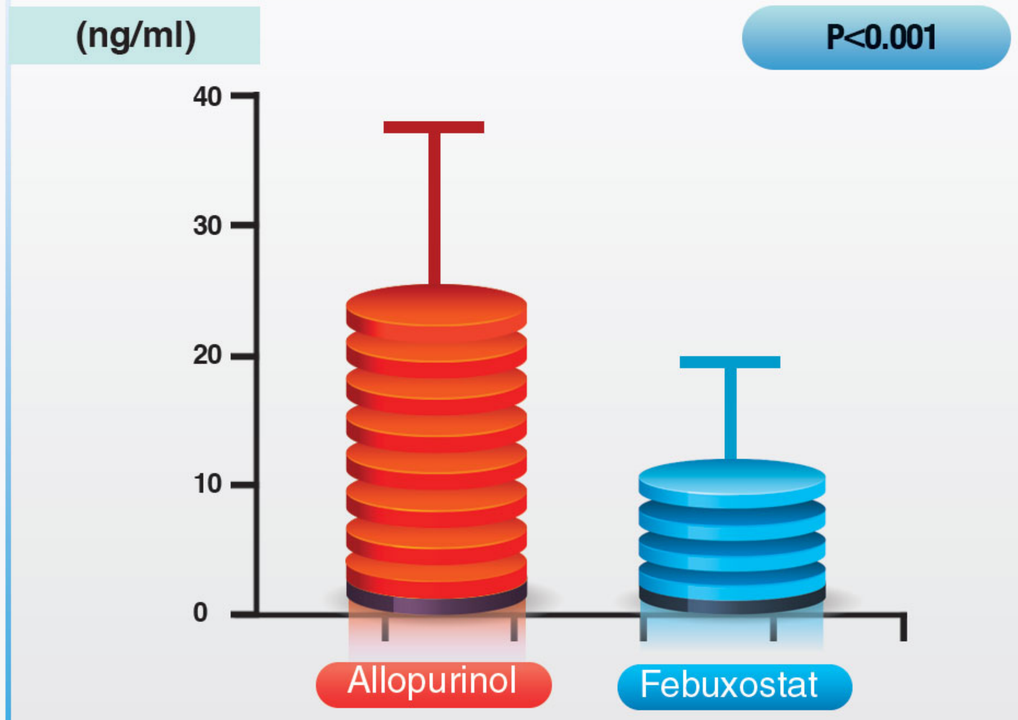
- Mean aged 60 years
- Diagnosed with symptomatic HF
- Hyperuricemia, SUA > 7.0–10.0 mg/dL

Follow up for 3 years

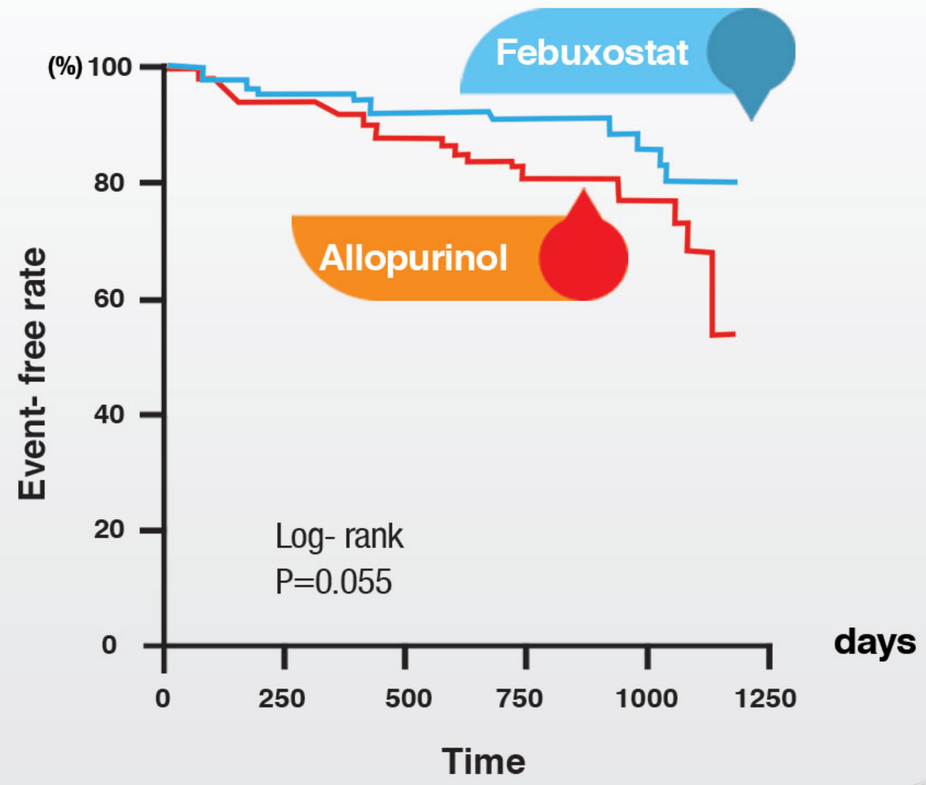
- Febuxostat pts (n = 128)
  VS.
- Allopurinol (n = 135)

Oxidative stress markers, such as 8-hydroxy-20-deoxyguanosine (8-OHdG) and xanthine oxidase (XO), were investigated to evaluate HF severity.

Comparison of urine 8-hydroxy-20-deoxyguanosine (8-OHdG) levels at 3 years between the allopurinol and febuxostat groups .



Kaplan–Meier analyses for patients free from hospitalization due to worsening heart failure in the febuxostat and allopurinol groups.



- **Febuxostat is potentially more effective than allopurinol for treating patients with chronic HF and hyperuricemia**

- ***Urine levels of the oxidative stress marker 8-hydroxy-20-deoxyguanosine were lower in the febuxostat group than in the allopurinol group (11.0±9.6 vs. 22.9±15.9 ng/mL)***

- ***The rate of patients free from hospitalization due to worsening HF tended to be higher in the febuxostat group than in the allopurinol group (89% vs. 83%).***

Unlike Allopurinol, Febuxostat is : [4,5,6,7,8]

- **Novel Selective non-purine xanthine oxidase/dehydrogenase inhibitor**
- **No urinary xanthine stone due to no effect on other enzymes involved in purine/pyrimidine metabolism**

- **1000 fold more potent XO inhibitor due to complete enzyme inhibition ,statistically significant:**
  - More rapid
  - Successful sustained reduction in SUA levels less than 6.0 mg/dl
  - Tophus size & number of tophi reduction than high dose Allopurinol
  - Complete elimination of gout flares

- **Lower the risk of Cerebral Reno cardiovascular events due to significantly:**
  - Superior antioxidant and anti-inflammatory effects on the vascular endothelial cell
  - Anti-atherogenic effect
  - Stronger Reno protective effect
  - Lower LDL, serum cholesterol and triglyceride levels

- **Once Daily Dosage**
- **Usage anytime without any relevant effect of food or antacids on its absorption**

- **Fewer drug–drug interactions**

- **High Tolerability especially in:**
  - Cardiovasculo renal disease with endothelial dysfunction
  - Stable kidney transplant recipients
  - Patients undergoing chemotherapy for hematologic malignancies
  - Patients with chronic gout & persistent hyperuricemia
  - Allopurinol hypersensitivity & allopurinol intolerant

- **No dosage adjustment needed for Patients with:**
  - Mild to-moderate renal disorder (CKD stage 1-3)
  - Hepatic insufficiency
  - Elderly patients
  - Those taking hydrochlorothiazide

References:

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3. Satoshi Suzuki, et al, Journal of International Medical Research, 2021.
4. Uptodate.com, 2023/ Febuxostat and Allopurinol.
5. Arrigo F.G. Cicero, et al, , Medical Principles and Practice, 2021.
6. Kentaro Kohagura et al, The Japanese Society of Hypertension 2023. FREED trial
7. Jing Wu, et al, International journal of rheumatic diseases, 2019.
8. Isha Puri, et al, Journal of community hospital internal medicine perspectives, 2020.

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