1/ 📣Hello #NephTwitter, we are back!
And this time we will talk about Nefecon💊 safety and adverse events🚨

2/ [Poll] Nefecon is the inaugural and exclusive agent to obtain complete approval from US FDA and European Medicines Agency for the treatment of the most common glomerulonephritis, which is:

Membranous nephropathy
FSGS
IgA nephropathy (IgAN)
Lupus nephritis

3/ IgAN treatment, Nefecon ➡️ targeted release budesonide (a type of corticosteroid) has some unique features:
🔵 its capsule dispense the medication at its max at the Peyer's patches in the terminal ileum
🔵 undergoes first-pass metabolism = minimizing systemic side effects

4/ This novel medication is important since it targets the mucosal source of galactose-deficient IgA1 (Gd-IgA1), thereby impacting the following:

⬇️ Gd-IgA1 immune cells activity
⬇️ anti-Gd-IgA1 antibody levels AND intensity of subsequent hits
⬇️ IgAN progression

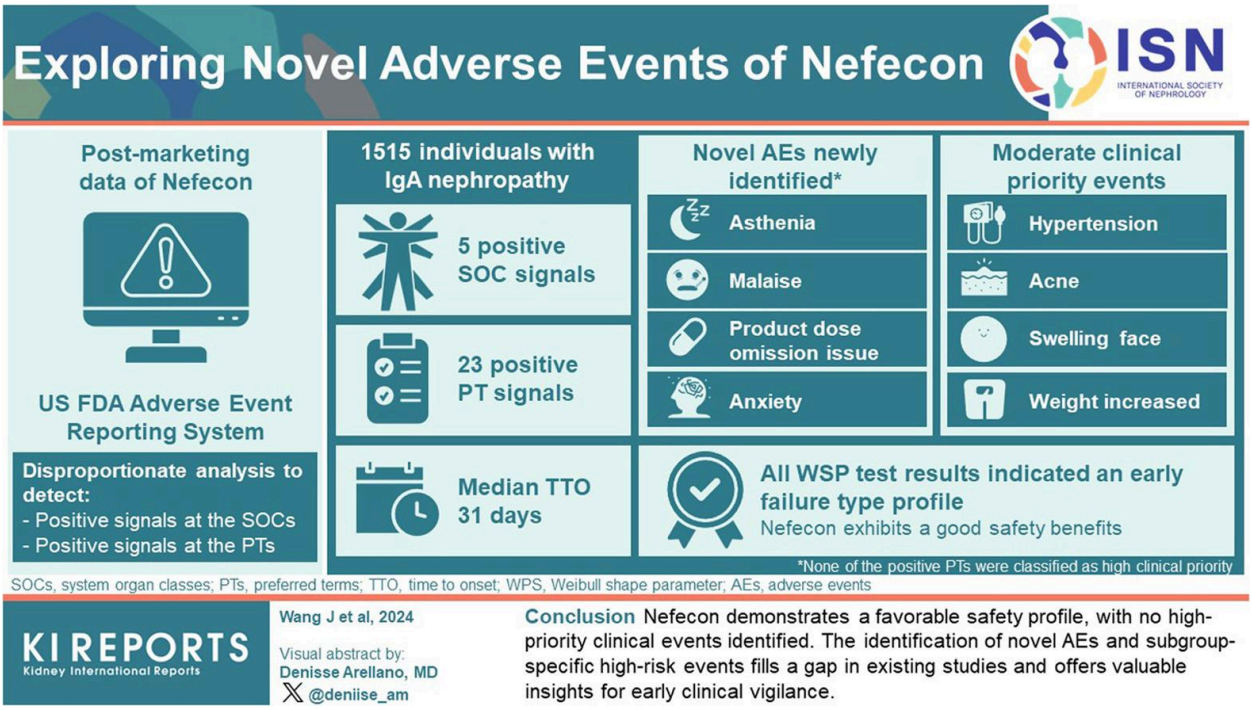
5/ While Nefecon has proven to be revolutionary, we should be aware of its adverse events (AEs) to ensure the safety of our patients.

[Poll] What was the most common AE reported in NEFIGAN and NefIgArd studies?
- Peripheral edema
- Hypertension
- Muscle cramps
- All of the above

6/ The most common AEs reported in NEFIGAN and NefIgArd studies were peripheral edema, hypertension and muscle cramps.

7/ Now, let's take a look 👀 at the study Exploring Novel Adverse Events of Nefecon by Wang, J, et.al. that went one step further and explore novel AEs with postmarketing data.

https://www.kireports.org/article/S2468-0249(24)01822-9/fulltext



8/ Abbreviations:
FAERS = FDA Adverse Event Reporting System
DPA = disproportionate analysis
SOC = system organ class
PT = preferred terms
IQR = interquartile range

9/ This study used data from the US FAERS ➡️ employed DPA to look for novel positive signals at the SOC (symptoms according to organ systems) level and also any novel preferred terms (PTs).

DPA = comparing observed and expected numbers of reports for a specific drug and AEs and hypothesize a correlation between them

10/ 1515 patients were analyzed from those there was ⬆️ incidence of AEs in males and the subgroup of patients 18 to 64 years old.

⬆️ incidence of AEs among 👨 males may be because 99.93% of the reports were from the US where IgAN prevalence between men and women is 3️⃣1️⃣

11/ Four novel AEs of Nefecon were identified:
🔴 asthenia
🔴 malaise
🔴 product dose omission issue
🔴 anxiety

12/ [Poll] 🗓️ Median onset time of 31 days with IQR of 7 to 106 days, this indicates that Nefecon has:

Early failure type profile
Intermediate failure type profile
Late failure type profile

13/ Given above median onset time of AEs, Nefecon has an early failure type profile. This means if the patient is going to fail the treatment, this is likely to happen early after starting this medication.

14/ 👨 Males had a higher relative risk of swelling face
👩 Females had a higher relative risk of swelling, muscle spasms, and hypertension

15/ Top3️⃣ frequently reported PTs within 18 to 64 years subgroup:
🔴 hypertension
🔴 peripheral swelling
🔴 weight increased

Top2️⃣ frequently reported PTs within 65 to 84 years subgroup:
🔴 hypertension
🔴 muscle spasms

16/ Among the positive PT signals, none were a high priority nor associated with mortality. Acne, hypertension, swelling face and weight increased were considered moderate clinical mortality.

17/ Note that 16mg of Nefecon showed similar efficacy in ⬇️ endogenous cortisol levels, it is important to acknowledge the risk of iatrogenic Cushing's syndrome.

18/ Strengths 💪 of this study: reports novel Nefecon AEs which gives a better picture of postmarketing real-world impact data and what to really expect with this medication. Limitations ⚠️ are FAERS is a voluntary reporting system and underreporting or delayed reporting of events can't be excluded. Also, most of the data were from the US, thus data may not be that generalizable.

20/ Learning about real-world postmarketing AEs is important for adequately keeping patients informed. Patient's education about potential adverse events is key for potentially ⬆️ compliance and adequate administration of this medication for better efficacy.

21/ Since systemic corticosteroids (ie. prednisone) and Nefecon have similar profiles, future studies could compare both medications' AEs to analyze if Nefecon's AEs are less burdensome than those with systemic corticosteroids.