

## Safer Prescribing of NSAIDs – GI and CV safety considerations

### Risk factors for NSAID induced GI adverse events:

- Age  $\geq 65$  years
- Previous history of GI bleeding, or gastroduodenal ulcer/perforation
- Concomitant use of medications that increase risk of upper-GI AEs (e.g. anticoagulants, antiplatelets, SSRIs, SNRIs, and corticosteroids).
- Serious comorbidity, e.g. CV disease, renal/hepatic impairment, diabetes, or hypertension.
- Prolonged duration or high doses of NSAID
- Excessive alcohol use
- Heavy smoking

- High risk** = history of complicated ulcer, or  $\geq 3$  risk factors.
- Moderate risk** = 1–2 risk factors.
- Low risk** = 0 risk factors.

### Additional risk factors include:

- Which NSAID used
- Presence of *H. pylori* infection

### How to reduce risk of NSAID induced GI complications:

#### NSAID factors

- Consider alternatives to oral NSAIDs
- Avoid concomitant use of medicines that  $\uparrow$  GI risk
- Rx lowest dose for shortest time
- Rx shorter acting NSAIDs i.e ibuprofen

#### Risk Assess (GI risk)

Risk	Prescribe
Low Risk	Non-selective NSAID *
Moderate Risk	NSAID + PPI, or coxib **
High Risk (PMH of PUD, GI bleed)	coxib + PPI, or NSAID + PPI (if CV risk)

#### *H. pylori* (NSAID naïve)

If starting NSAIDs for 1<sup>st</sup> time and dyspepsia/history of GI ulceration:

- Consider testing for *H. pylori*
- Rx eradication if *H. pylori* positive

\* Preferred NSAIDs: ibuprofen  $\leq 1200$ mg/day, naproxen

\*\* Preferred coxib: celecoxib

## Risk factors for NSAID induced CV or renal adverse events:

- Existing cerebrovascular, CV disease, heart failure, IHD, PAD
- Renal impairment
- Age  $\geq$ 65 years
- Risk factors for CV disease e.g. diabetes, or hypertension
- Prolonged duration or high doses of NSAID
- Heavy smoking

## Drugs that increase risk of renal adverse effects with NSAIDs:

- ACEIs / ARBs
- Loop and potassium sparing diuretics,
- Probenecid

## How to reduce NSAID-induced CV and renal complications:

**NSAID needed:**

- Rx lowest dose for shortest time
- Preferred NSAIDs: ibuprofen  $\leq$ 1200mg/day or naproxen

<b>Do not Rx any NSAID in:</b>	<ul style="list-style-type: none"><li>• Severe heart failure,</li><li>• Severe renal impairment (eGFR &lt; 30mL/min)</li></ul>
<b>Do not prescribe coxibs, diclofenac, aceclofenac or high dose ibuprofen (&gt; 2400 mg daily) in:</b>	<ul style="list-style-type: none"><li>• Ischaemic heart disease.</li><li>• Inflammatory bowel disease (coxibs only).</li><li>• Peripheral arterial disease.</li><li>• Cerebrovascular disease.</li><li>• Congestive heart failure (NYHA class II–IV)</li></ul>
<b>Do not prescribe etoricoxib or high dose ibuprofen in:</b>	<ul style="list-style-type: none"><li>• Uncontrolled hypertension (persistently above 140/90 mmHg)</li></ul>