## Commentary: risk factors for gastrointestinal bleeding in NSAID users – authors' reply

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Sirs, We thank Dr Hawkey for his interest in our article<sup>1, 2</sup> and agree with some of his comments concerning the limitations of the study. In our article<sup>2</sup> and in the original publication of the CONDOR trial,<sup>3</sup> we clearly stated that the most frequent outcome event was a decrease in haemoglobin (Hb) 2g/dL of presumed small bowel origin. The adjudication of the events was based on a rigorous protocol, where investigators blinded to treatment excluded other potential sources of a Hb drop, including ongoing inflammatory, renal, cardiac or haematological conditions.

We acknowledged the lack of direct evidence for the presence of bleeding lesions beyond the duodenum in most cases of Hb decrease without nongastrointestinal reasons, and that is why those events were reported as 'of presumed small bowel origin' with tempered conclusions. Although we agree that suppression of haematopoiesis by chronic inflammation may explain some of the Hb decrease seen in our study, we have no evidence of baseline differences in the osteoarthritis (OA) population between the two arms of our study, and we are not aware that celecoxib should have a different effect on haematopoiesis or chronic inflammation than diclofenac in our OA patients that could explain the differences between the two arms.<sup>3</sup>

On the contrary, there is considerable evidence that traditional nonsteroidal anti-inflammatory drugs (NSAIDs) induce small bowel lesions more often than celecoxib<sup>4, 5</sup> and that occult blood loss in the GI tract is more common with NSAIDs than coxib use.<sup>6</sup> All of these facts support the plausibility of our conclusions.

We believe that small bowel lesions associated with NSAID use have clinical relevance and that this is a new area of interest. Our study is an early foray in this field, and further studies should confirm and better define the risk factors and mechanisms beyond the Hb decrease associated with NSAID use, including those linking Hb decreases in OA patients with additional tests looking for the presence of lesions in the upper and lower gastrointestinal tract.

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