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# Observational studies and “the eye of the beholder”

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**Observational studies need explanations in both directions of association to avoid interpretation bias**  
<https://bit.ly/3d7kLnG>

**Cite this article as:** Johnson MJ, Ekström M, Currow DC. Observational studies and “the eye of the beholder”. *Eur Respir J* 2020; 56: 2001637 [https://doi.org/10.1183/13993003.01637-2020].

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## *To the Editor:*

NWARU *et al.* [1] report a dose-related association between short-acting  $\beta_2$ -agonists (SABA) and poorer clinical outcomes (exacerbations, emergency department visits, hospital admissions and mortality) in asthma. Acknowledging that observational studies cannot establish causality, they conclude: “Regardless of whether there is a causal effect of SABA use and these adverse effects, or if they are mainly a marker for more severe asthma and/or a reflection of the frailty of the patients, increased use of SABA should alert clinicians to monitor these patients more closely.” These are important conclusions that should inform clinical care and be incorporated into international guidelines.