





## Outcome of liver transplantation for hepatopulmonary syndrome: a Eurotransplant experience

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**Cite this article as:** Raevens S, Rogiers X, Geerts A, *et al.* Outcome of liver transplantation for hepatopulmonary syndrome: a Eurotransplant experience. *Eur Respir J* 2019; 53: 1801096 [https://doi.org/ 10.1183/13993003.01096-2018].

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## To the Editor:

Hepatopulmonary syndrome (HPS) is a pulmonary vascular complication of liver disease that affects up to 30% of patients with cirrhosis [1]. Intrapulmonary vascular dilatations and shunts result in gas exchange abnormalities, ranging from elevated alveolar–arterial oxygen gradients with no hypoxaemia to very severe hypoxaemia [1, 2]. Currently, liver transplantation (LT) is the only treatment option [3]. The Model for End-Stage Liver Disease (MELD) is a scoring system for assessing liver disease severity that has been validated to predict the 3-month waiting list mortality and is used by Eurotransplant for prioritising allocation of liver transplants [4]. However, this score poorly predicts overall and post-transplant survival, and does not take into account complications that affect outcomes independent of liver disease severity

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[5]. Hypoxaemia in HPS is generally progressive and mortality is highest in advanced stages [6, 7]. In this sense, a standard exception (SE) policy has been established to prioritise patients with severe HPS (arterial oxygen tension  $(PaO_2) < 60 \text{ mmHg}$ ), as their severity of illness is not properly reflected by the MELD score. In the pre-SE MELD era, FALLON *et al.* [1] reported that HPS is associated with a doubled risk of mortality compared to patients without HPS. In 2014, GOLDBERG *et al.* [5] reviewed SE LT outcomes in HPS patients in the USA and found that LT candidates with SE for HPS had decreased pre-transplantation mortality and superior overall survival compared to non-HPS patients. The European outcomes for patients with SE for HPS have never been explored. In this retrospective study, we analysed overall, pre-transplant and post-transplant survival in LT candidates with SE for HPS within Eurotransplant, and determined whether the intent of the exception policy is being met.