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## The necessity of policy change on anaemia management of pregnant women in LICs --Manuscript Draft--

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<b>Corresponding Author:</b>	Tomohiko Sato, M.D., Ph.D. Jikei University Hospital Minato, Tokyo JAPAN
<b>First Author:</b>	Tomohiko Sato, M.D., Ph.D.
<b>Order of Authors:</b>	Tomohiko Sato, M.D., Ph.D. Ryu Yanagisawa, M.D., Ph.D.
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Please type the full reference to that content here (for example: Cuzick J et al. Use of anastrozole for breast cancer prevention (IBIS-II): long-term results of a randomised controlled trial. Lancet 2020; 394: 117-22). as follow-up to "Are you are writing in response to published content in The Lancet?"	Pasricha S-R et al. Ferric carboxymaltose versus standard-of-care oral iron to treat second-trimester anaemia in Malawian pregnant women: a randomised controlled trial. Lancet 2023; 401: 1595-609.
<b>Author Comments:</b>	This is a correspondence letter to the Lancet article entitled "Ferric carboxymaltose versus standard-of-care oral iron to treat second-trimester anaemia in Malawian pregnant women: a randomised controlled trial" by Pasricha S-R et al. (Lancet 2023; 401: 1595-609). Additionally, we would like to point out misspellings in the associated comment by Dr Shand and Kldson-Gerber (Anaemia in pregnancy: a major global health problem); ferrous carboxymaltose should be ferric carboxymaltose.

## Title

The necessity of policy change on anaemia management of pregnant women in LICs

## Text

Despite the feasibility/safety of ferric carboxymaltose (FCM) administration for pregnant women in a low-income country (LIC) setting, the negative results of REVAMP trial<sup>1</sup> are disappointing. Our related concerns are as follows.

First, the complex nature of anaemia among trial participants might have underestimated the anaemia-improving effect of FCM monoadministration; the FCM group showed a significant improvement in iron deficiency (ID) and iron deficiency anaemia (IDA) while there was no between-group difference in anaemia incidence at 36 week's gestation (Table 1&2). Subgroup analysis among those who had predominantly ID (without suspicion of coexisting inflammation) could investigate the true contribution of FCM to maternal/neonatal efficacy outcomes.

Second, the trial confirmed the minimal effect of oral iron supplementation in LICs.<sup>2</sup> The control group had about a 30% decrease in IDA incidence during 10-to-23-week follow-up, but showed no improvement in ID (Table 1&2), suggesting that low adherence is the major limitation.

Third, other than malaria and HIV, maternal biomass smoke exposure could have contributed to the high incidence of anaemia of inflammation. An Ethiopian study showed the association of anaemia in pregnant women with indoor air pollution from medium-polluting fuels.<sup>3</sup> Another Malawian study revealed reduced birth weight in children whose mothers used high-pollution fuels; the incidence of low birthweight <2500g was approximately 10%.<sup>4</sup> Surprisingly, the incidence was higher in the REVAMP trial (16-17%).<sup>5</sup>

Collectively, the REVAMP trial might call for the necessity of policy change for better anaemia management of pregnant women in LICs; from routine iron supply to implementing feasible IDA screening systems.

(250/250 words)

## References

- 1 Pasricha S-R, Mwangi MN, Moya E, *et al.* Ferric carboxymaltose versus standard-of-care oral iron to treat second-trimester anaemia in Malawian pregnant women: a randomised controlled trial. *Lancet* 2023; **401**: 1595–609.
- 2 Ba DM, Ssentongo P, Kjerulff KH, *et al.* Adherence to Iron Supplementation in 22 Sub-Saharan African Countries and Associated Factors among Pregnant Women: A Large Population-Based Study. *Curr Dev Nutr* 2019; **3**. DOI:10.1093/CDN/NZZ120.
- 3 Andarge SD, Areba AS, Kabthamer RH, Legesse MT, Kanno GG. Is Indoor Air Pollution From Different Fuel Types Associated With the Anemia Status of Pregnant Women in Ethiopia? *J Prim*

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- 4 Milanzi EB, Namacha NM. Maternal biomass smoke exposure and birth weight in Malawi: Analysis of data from the 2010 Malawi Demographic and Health Survey. *Malawi Med J* 2017; **29**: 160–5.
- 5 Pasricha S-R, Mwangi MN, Moya E, *et al*. Ferric carboxymaltose versus standard-of-care oral iron to treat second-trimester anaemia in Malawian pregnant women: a randomised controlled trial. *Lancet* 2023; **0**. DOI:10.1016/S0140-6736(23)00278-7.

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### **Authors**

Tomohiko Sato, M.D., Ph.D.

Associate Professor

Division of Transfusion Medicine and Cell Therapy

The Jikei University Hospital

Tokyo, Japan

tomosatou@jikei.ac.jp

Ryu Yanagisawa, M.D., Ph.D.

Associate Professor

Division of Blood Transfusion

Shinshu University Hospital

Nagano, Japan

ryu@shinshu-u.ac.jp

All authors declare no competing interests.

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