

## Preoperative investigations guidelines from the Indian Society of Anaesthesiologists

Dear Editor,

Practice guidelines on preoperative investigations from the Indian Society of Anaesthesiologists (ISA) were published in the Indian Journal of Anaesthesia to determine whether the results of routinely ordered investigations influence anaesthetic management and outcome. It was not for screening of disorders which needs to be followed as per standard practice.<sup>[1]</sup> Concerns have been raised regarding a few of these recommendations.<sup>[2,3]</sup>

The authors provide evidence regarding the increasing burden of coronavirus disease 2019 (COVID-19) and diabetes mellitus nationally and globally to present their case for preoperatively blood glucose testing for all patients.<sup>[2,3]</sup> Evidence from non-diabetic patients showed several referrals based on elevated blood glucose values without influencing the outcomes.<sup>[1]</sup> Random blood glucose test results may be confusing due to correlation required between blood glucose values and last oral intake, quantity and caloric content, and the duration since the last intake. Fasting blood glucose is a low-cost, reliable investigation. However, contrary to the authors' opinion, it causes inconvenience to the patients because of fasting prerequisites. Therefore, although the prevalence of diabetes mellitus is on the rise, the evidence and expert opinions point to testing based on preoperative assessment than testing for 'screening'.

Authors propose routine preoperative 12-lead electrocardiogram (ECG) for all patients.<sup>[3]</sup> Several international guidelines DO NOT RECOMMEND routine preoperative ECG for patients scheduled to undergo minor risk procedures as there is no added benefit.<sup>[4-7]</sup> Up to 40% of the routinely done ECGs can have some abnormality, which would then result in referral and/or additional testing. However, it eventually does not influence the anaesthetic management or perioperative outcomes.<sup>[8,9]</sup> This delays the surgical procedure and adds to the expenses for patients and the burden of other medical professionals.

Authors contest the recommendation regarding chest X-ray (CXR) testing based on (a) international guidelines, (b) age 50 years and (c) issues related to radiation risk and cost.<sup>[2]</sup> As outlined in Table 4 of the

guidelines,<sup>[1]</sup> the majority of the studies considered for determining the utility of preoperative CXR were from the Indian population. Adverse outcomes or change in management was observed in three of these four studies.<sup>[10-13]</sup> In addition to this evidence, factors relevant to the Indian population that may influence the development of lung disease with advancing age (endemic nature of tuberculosis, atmospheric pollution and smoking) were considered by the subject experts. These were weighed against the radiation risks before arriving at the current recommendations. Due to these specific aspects related to the Indian scenario, recommendations for CXR from the ISA differ from other international guidelines. Regarding the age factor for CXR, this recommendation was based on expert consensus due to a lack of literature after much debate and conclusion only during the third round of Delphi consensus.

We thank the authors for initiating these healthy deliberations. The guidelines should be considered as the starting point in the journey of preoperative investigations and not as an endpoint. Thorough preoperative assessment should be the basis for further testing beyond the recommended routine investigations. It is to be noted that the guidelines may be modified in future updates based on accumulating evidence.

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### Conflicts of interest

There are no conflicts of interest.

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