considering that strain measurements with this vendor are derived from tracking of the entire myocardial wall. For their findings to be clinically relevant to practitioners, it would be of great value if the authors could give us case examples that presented this technical challenge. Similarly, providing an interobserver and intraobserver analysis as well as test-retest variability for GLS in a subset of randomly selected patients would be reassuring to the clinicians and echocardiographic laboratories who are considering adding this parameter to their imaging protocol for a similar patient population.

Also, we would appreciate if the authors could further comment on the pathophysiological basis underlying the superiority of GLS over left ventricular ejection fraction to predict mortality. Could this association be driven by patients with smaller hypertrophied ventricles in whom GLS might overcome the limitations of left ventricular ejection fraction in the assessment of systolic function and better predict clinical events? In the same vein, we are questioning the rationale for not including left ventricular dimensions in the Cox proportional hazard models. Regarding the outcomes, although we understand that the data may have been difficult to collect, we believe that using all-cause mortality instead of cardiovascular mortality, which would have made intuitive sense in this cohort, further mitigates the conclusions that can be derived from the results. We acknowledge that GLS is an echocardiographic tool with a prognostic potential that could be used in our heart failure population, and we are hoping to better understand its applicability with the help of the authors' answers.

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THE AUTHORS REPLY:

We thank Dr. Zaïni and colleagues for the interest in our paper (1). We appreciate the importance of standardizing the region of interest (ROI) placement when obtaining global longitudinal strain (GLS). In case of myocardial wall thinning, the segment was excluded if the investigator assessed that it was being inadequately tracked. Therefore, we would recommend clinicians to carefully visually assess each ROI segment and exclude those whose traces are not compatible with speckle tracking when obtaining GLS. Our research group has previously validated the interobserver and intraobserver reproducibility of GLS in an ischemic patient population with good results (2). We are not able to provide test-retest variability because our study is retrospective.

To further comment on this issue, the software (Echopac BT12, GE Vingmed, Horton, Norway) used at the time of analysis did not allow adjustment of the width of individual segments. However, BT12 and GLS are comparable to a different vendor and to the newer version, BT13 (3). BT13 allows for readjustment of the individual segments in order to comply with segmental width differences. It would have been interesting to use this software in the case of asymmetrical wall thickness, but the software was not available at the time of analysis. Though an intriguing concept, the authors are not aware of any study examining the effect of regional ROI width differences, and what implications it has for GLS.

In the multivariable Cox regression, we only included echocardiographic parameters that were significant predictors of mortality in the univariable analysis. Left ventricular internal dimension was not a univariable predictor (Table 2 in our paper [1]) and was therefore not included. We cannot exclude the possibility that the prognostic superiority of GLS is derived from patients with small hypertrophied ventricles; however, we do not believe this speculation can be justified by using our data alone considering that we included left ventricular mass index in the multivariable model. We believe GLS may be a more sensitive measure of longitudinal systolic performance compared with left ventricular ejection fraction, which essentially is a measure of volumetric change.

We agree that it is important to account for cardiovascular mortality. As stated, this is a retrospective study and in this setting, all-cause mortality was the most unbiased endpoint to retrieve since all deaths are registered by the Danish Civil Registration

System, resulting in 100% follow-up. However, we are looking into retrieving secondary endpoints such as cardiovascular mortality and, based on intuition, we think this will further improve the prognostic strength of GLS in our cohort.

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One Good Friend Is Better Than Many

We have read with great interest the paper by Prati et al. (1) on the CLI-OPLI II study (Centro per la Lotta contro l'Infarto-Optimisation of Percutaneous Coronary Intervention). The newly defined *suboptimal stent deployment* was associated with an increased risk of major adverse cardiac events. Since the evidence to support the clinical benefit of optical coherence tomography (OCT) during percutaneous coronary intervention (PCI) remains limited, this study provides important information about its use for stent deployment. However, we would like to draw attention to the data presented in the CLI-OPCI II study, especially regarding baseline characteristics and definitions of suboptimal OCT stent deployment.

First, the combination of many conditions obfuscates the interpretation of results. Patients with different clinical presentations (stable ischemic heart disease and an acute coronary syndrome) and different types of stents (i.e., bare-metal stent, drug-eluting stent, and bioabsorbable vascular scaffold) were included. Since in other studies, PCI guidance using imaging has been beneficial mostly in acute coronary syndrome (2) (i.e., ST-segment elevation myocardial infarction), and each device has a different neointimal growth pattern and extent, it is difficult to draw any conclusion from this report.

Second, the parameters for suboptimal stent deployment are too many to be measured and interpreted online in the catheterization laboratory. The authors suggested 6 significant factors that had different weightings. Conversely, in the most recent published IVUS-XPL (Impact of Intravascular Ultrasound Guidance on Outcomes of Xience Prime Stents in Long Lesions) trial, the authors chose only 1 IVUS criterion for stent optimization after PCI (3). This latter simple approach is easier to adopt and implement in clinical practice.

Third, the definition of suboptimal OCT stent deployment has been changed (**Table 1**), despite the authors' claim: "The aim of the present study was to assess the impact of these pre-specified OCT

TABLE 1 Stent Underexpansion Criteria

	CLI-OPCI I	CLI-OPCI II	XPL IVUS
In-stent MLA	≥90% of average reference lumen area or ≥100% of lumen area of reference segment with lowest lumen area	<70% of average reference lumen area or in-stent minimum or lumen area (MLA) <4.5 mm^2	MLA greater than lumen area at distal reference segment
Edge dissection	Linear rim of tissue with width ≥200 μm	Linear rim of tissue with width ≥200 μm	
Reference lumen narrowing	Lumen area <4.0 mm^2	Lumen area <4.5 mm^2	
Malapposition	Stent-adjacent vessel lumen distance >200 μm	Stent-adjacent vessel lumen distance >200 μm	
Intrastent plaque/thrombus protrusion	Intraluminal mass ≥200 μm in thickness	Intraluminal mass ≥500 μm in thickness	

CLI-OPCI = Centro per la Lotta contro l'Infarto-Optimisation of Percutaneous Coronary Intervention; MLA = minimal lumen area.