

their performance ratings relative to peers. Our data demonstrate that such fears appear unfounded.

In conclusion, although one can debate the impacts of public reporting, our study should be interpreted to say that if it is undertaken, current modeling methods are generally adequate to capture and adjust for case mix and risk and thereby avoid penalizing clinicians who take on high-risk patients. We hope such information encourages providers to think more about the outcomes of their high-risk patients than about the impact of these on their procedural report card results.

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<http://dx.doi.org/10.1016/j.jcin.2015.04.007>

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Uncertain Detection of Nonuniform Scaffold Expansion Patterns Using Optical Coherence Tomography

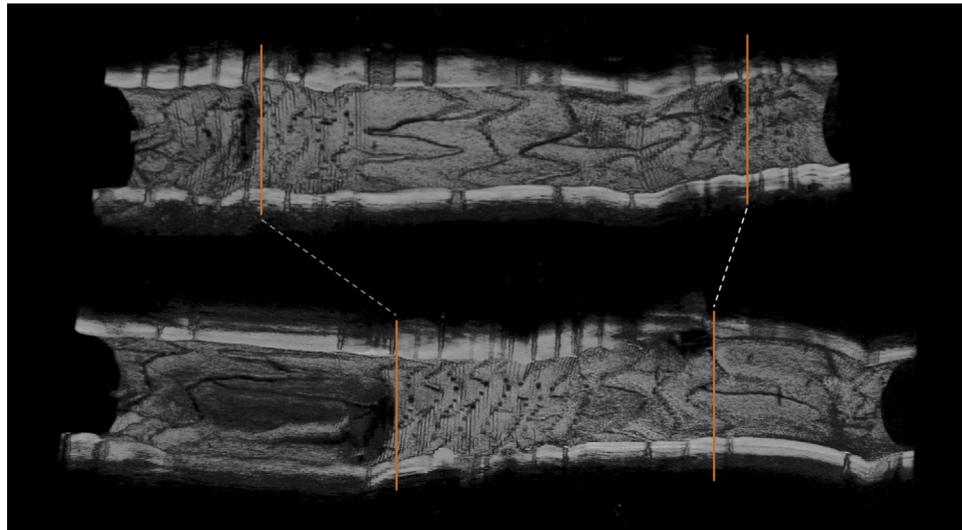


We read with interest the paper by Ohno et al. (1) and found that their conclusions merit a few comments. Longitudinal nonuniform expansion patterns by the ABSORB bioresorbable scaffold (BVS) (Abbott Vascular, Irvine, California) may be of clinical

importance, but the use of optical coherence tomography (OCT) to identify such patterns requires methods that take catheter motion artifacts into account. The variation in length measurements by OCT compared with nominal length has been reported in ABSORB BVS-treated patients with differences of as much as 5.2 mm (2) and as much as 10 mm in metal stent-treated patients (3), although stent independent. The OCT-evaluated lengths also showed variation within the same scaffold at different time points (2), indicating that OCT may not be appropriate as a criterion standard for intravascular length measurements. Variation in length occurs in subsegments and may cause visible motion artifacts of elongation and compression at each heartbeat. Faster pullback systems (36 mm/s, OPTIS Integrated System, St. Jude Medical, St. Paul, Minnesota; 40 mm/s, LUNAWAVE, Terumo, Tokyo, Japan) reduce the impact of motion artifacts (4), and a prototype system enabling long pullbacks at 100 mm/s “in one heartbeat” has been reported (5).

The 3-dimensional (3D) OCT reconstructions shown by Ohno et al. might call for a different interpretation because the “elongated” scaffold (Figure 1D) actually looks partially longitudinally compressed, also when compared with the “normal” scaffold (Figure 1H). Further, the struts of the BVS in Figure 1D in both ends seem affected by fracture, motion artifacts, or an oblique imaging wire position. To rule out catheter motion artifacts as the explanation of potential scaffold compression or elongation, it is advisable to compare 3D OCT reconstructions of at least 2 subsequent pullbacks of the same section.

The reported finding of differences in strut thickness may call for a more systematic workup because a mean strut thickness reduction of 15 μ m (9.6%) by the suggested length increase of 2.6 mm (14.4%) is questionable. When deployed, the scaffold adapts to the vessel wall by changing angulations within the sinusoidal hoops and connectors, and because the hoops in Figure 1D are not straightened fully by dilation or drag from the connectors, a substantial reduction in thickness due to elongation of the scaffold is unlikely. If the reduction in strut thickness is real, struts in the hoops might have been stretched locally by the higher deployment pressure, but this is still uncertain because the hoops are not fully extended in the 3D reconstruction. Although not previously reported, struts might also have been squeezed by the higher deployment pressure, but subtle production differences between the 2 sizes of the ABSORB scaffold might also have caused a potential difference in strut thickness. However, explanations may also

FIGURE 1 Uncertain Length Measurements by Optical Coherence Tomography

Two consecutive corresponding optical coherence tomography acquisitions of the same section showing catheter motion artifact with differences in elongation and compression between the 2 pullbacks.

include methodological limitations in measuring strut thickness by OCT as this is not a simple task.

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<http://dx.doi.org/10.1016/j.jcin.2015.04.009>

Please note: Lene Nyhus Andreasen has received a travel grant from St. Jude Medical. Ida Riise Balleby has received travel grants from St. Jude Medical and Abbott. Dr. Holm has received speaker honoraria and institutional research grants from St. Jude Medical and Terumo; and an institutional research grant from Abbott.

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REPLY: Triple Antithrombotic Therapy Following Anterior ST-Segment Elevation Myocardial Infarction



We thank Drs. Potter and Bastiany (1) for their interest in our paper (2). We compared patients with anterior ST-segment myocardial infarction managed with primary percutaneous coronary intervention (PCI) who were subsequently prescribed warfarin to patients who were not. We excluded patients with left ventricular thrombus found on a transthoracic echocardiogram (TTE). The primary outcome was a composite of net adverse clinical events (NACE) consisting of all-cause mortality, stroke, reinfarction, or major bleeding at 180 days of the TTE.

The propensity score was derived by fitting a multivariable logistic regression model where treatment (warfarin vs. no warfarin) was used as the outcome. The derived propensity score was then used to derive the weights for the inverse probability weighting logistic regression model where NACE was