Reply to the Editor:

We thank Son and colleagues for their interest in our work,¹ and we are pleased to provide some additional information regarding the sex and age profile of the studied mice and the follow-up protocol.

At the time of intervention, sexes were matched, with 50% of the mice male and 50% female in each group. Although the matching was not explicitly stated in the Methods section, this was shortly alluded to in the discussion comparing our work to the work of Bouhidel and coworkers.² In addition, in our study post hoc subgroup analysis did not reveal differences in infarct size either early or late after ischemia-reperfusion, although the power was insufficient for a reliable subgroup analysis.

Our main aim in choosing a different age at the postconditioning time point was to obtain the same age (± 7 days) at the time we performed pressure-conductance and histologic analyses at the end of the experiment. For both groups, this was between 23 and 24 weeks, an age that has been shown to influence considerably intracardiac volumes as measured by pressure-conductance analysis and the degree of fibrosis seen on histologic slices.³ In our study¹ we further showed that postconditioning preserved function comparably early after ischemia-reperfusion, both at 12 weeks (cine magnetic resonance imaging, original Table 2¹) and at 24 weeks (pressure-conductance, original Table 1¹). Postconditioning was thus functional at both ages.

When we compared the effects of postconditioning 1 and 10 weeks after ischemia-reperfusion in the studied genotypes with cine magnetic resonance imaging, this was done in the same animals that were followed up longitudinally. Post hoc repeated measures analysis between 1 and 10 weeks of follow-up showed that the difference with or without postconditioning persisted, suggesting that the final difference in observed

left ventricular mass probably was initiated between the ischemia-reperfusion procedure and the first week of follow-up.

We again thank Son and colleagues for their interest.

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NEEDLESCOPE-ASSISTED 3-POINT FIXATION OF THE PECTUS BAR IN THE NUSS PROCEDURE

To the Editor:

I read with great interest the article by Bond and colleagues,¹ which discussed an approach involving a subxyphoid incision and 3-point fixation of the pectus bar to limit cardiac perforation and bar displacement in the Nuss procedure. These investigators made a central incision in the subxyphoid location to lift the sternum and increase the substernal space, as well as to place the central sutures.

Cardiac laceration can be an unexpected and severe complication in minimally invasive repair of pectus excavatum. Elevating the depressed sternum by sternal lift, suction cup, or the crane technique¹⁻³ minimizes contact between the introducer and the pericardium, allows for less traumatic placement of the pectus bar, and can confirm hemostasis and the integrity of the pericardial sac. Bar displacement is one of the most common and serious complications after the Nuss procedure. Several techniques, including a 3-point fixation of the bar,^{1,4,5} have been used to prevent bar displacement.

I would like to share some of the advantages of using needlescope-assisted 3-point fixation of the pectus bar without an additional incision in the Nuss procedure. These include reduced bleeding as well as reduced postoperative scarring. This operative procedure is similar to the one described, except for a few key points. First, we used the crane technique and wire stitches² to elevate the depressed sternum. Second, a needlescope (2-mm mini fiber telescope; Richard Wolf GmbH, Knittlingen, Germany) was applied through the skin stab incision along the midaxillary line to allow direct visualization. Third, using an endo-needle holder (Olympus Winter & Ibe GmbH, Hamburg, Germany) or Deschamps needle (B. Braun Aesculap AG, Tuttlingen, Germany), 3-point fixation of the bar was done with No. 5 Ethibond (Ethibond Excel; Ethicon Inc, Somerville, NJ) sutures (Figure 1).

Without additional incisions, we used needlescope-assisted 3-point fixation of the pectus bar and the crane technique in the Nuss procedure. As of December 2013, we have used this procedure in 45 consecutive patients with pectus excavatum and have experienced no cardiac bleeding related to bar insertion and fixation during the operation and have observed a reduced rate of bar displacement.