permanent pacemaker (PPM) placement within the combined mitral tricuspid group. More specifically, the incidence of our secondary clinical endpoint was 47% (16 of 34) in the patients who received a Carpentier Edwards Classic ring and 35.2% (19 of 54) in those who received a “less rigid” Carpentier Edwards Physio ring ($P = .18$). Understanding the true influence of the implanted prosthetic material rigidity on the occurrence of PPM will require further studies.

Although we reported a high prevalence of PPM after concomitant tricuspid annuloplasty, we found at the end a much lower incidence of PPM placement than that previously reported in the literature for isolated tricuspid valve annuloplasties. $^{5,6}$ This was due mainly to the effect of our strategy to extend the observation period after PCA. Nonetheless, Mestres and Suri believe that these results challenge the 2012 European Society of Cardiology/European Association for Cardio-Thoracic Surgery recommendations and the 2014 American College of Cardiology/American Heart Association guidelines, which encourage prophylactic tricuspid annuloplasties. $^{3,4}$ In addition, they emphasized that prophylactic tricuspid annuloplasty has not been shown to diminish the risk for subsequent reoperation on the tricuspid valve. However, in our own experience, this prophylactic approach has been responsible for a significant decrease in the incidence of late severe functional tricuspid regurgitation (TR) over the last decade (see Central Figure). Furthermore, Goldstone and colleagues $^{7}$ recently identified indexed tricuspid annular diameter as the sole risk factor for late TR in patients undergoing mitral valve surgery for degenerative disease with no TR or only mild TR preoperatively. Moreover, Desai and colleagues $^{8}$ showed that the ability of mitral valve correction alone to improve functional TR is of short-term duration, and that even moderate residual TR has an adverse effect on mortality. $^{9}$ Finally, late severe functional TR is rarely addressed surgically, mainly because of an associated operative mortality as high as 30%. $^{10}$ Therefore, a low long-term tricuspid valve reoperation rate could not be the only criteria to promote the strategy of isolated mitral valve surgery.

We fully agree with the remark of Mestres and Suri on the ethical importance of informing patients about the risk of postoperative PPM before concomitant prophylactic tricuspid annuloplasty in the setting of mitral valve intervention. Nevertheless, one can also argue that patients should be informed about the risk of developing severe functional TR late after correction of a left-sided heart valve disease, an evolution that carries a risk of severe right ventricular dysfunction with poor survival.

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References

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PREVENTIVE TRICUSPID ANNULOPLASTY: WHEN BENEFIT JUSTIFIES THE RISK. WHAT ELSE? 
Reply to the Editor:
We were happy, pleased, and honored to discuss the contribution by Jouan and colleagues published in the Journal. The main issue was whether rigid ring annuloplasty has an influence on outcomes, especially when related to permanent
pacemaker implantation (PPM). Jouan and colleagues² are clear when defending prophylactic tricuspid annuloplasty to counteract late severe functional tricuspid regurgitation (TR) and an extended observation period after postoperative conduction abnormalities aimed at decreasing the incidence of PPM. Although in his reply published in the Journal,³ Jouan agrees on our remarks on the importance of informing patients on the eventual risk of PPM after prophylactic tricuspid annuloplasty at the time of mitral intervention, he is also strong on producing information of the risk of developing functional TR that carries mortality over time.

The contribution of Jouan and colleagues² and our comments¹ are instrumental in highlighting what is known today. First, tricuspid valve surgery is a challenge (Figure 1). It is likely that our understanding of the disease and its different forms is still suboptimal, considering that accumulated information is based on retrospective studies covering long periods of time⁴ or observational studies with large differences in sample sizes and variability in inclusion criteria.² Second, we have restricted room to expand our knowledge, because methodologically sound studies are not easy to design and execute when one considers logistics and finance among other issues.

Prophylaxis in tricuspid surgery is meant to be a matter of discussion. We may need a solid and unquestionable definition in this setting. The data from Jouan and colleagues² come from an observational study with still-limited follow-up of less than 60 months. Although their results are more than remarkable, there may be need for additional input in the future. There is more recent controversy, as data from Shinn and colleagues⁵ from the Mayo Clinic support no influence of the method of annuloplasty used on recurrence of TR over time in their 15-year experience, therefore challenging a number of studies.³ In this case, however, a number of methodology issues have been addressed in a related commentary by Antunes.⁶ This is not uncommon in contributions dealing with the tricuspid valve because of all of the aforementioned reasons. Lack of standardization is still significant, and many answers to our question may come only after studies that we know are difficult to implement. Consistently neglecting the tricuspid valve is still significant, also.²

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References

Letters to the Editor

DOES N2 FROZEN SECTION MAKE SENSE IN cN0 NON–SMALL CELL LUNG CANCER PATIENTS?
To the Editor:

We have carefully read the article by Yang and colleagues¹ about the outcomes after lobectomy when unexpected pN2 are found. Quite surprising, they concluded that survival was comparable with cN2 patients who underwent induction therapy and subsequent lobectomy. In particular, the survival of surprise N2 patients was similar to that of postinduction cN2 patients if adjuvant therapy were administered.

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FIGURE 1. Tricuspid valve suture annuloplasty.