Reviewer's report

Title: Intraoperative Electron Radiation Therapy (IOERT) in the Management of Locally Recurrent Rectal Cancer

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Reviewer: Jennifer Wo

Reviewer's report:

This is a well written and meticulously performed single-institutional study from the University of Heidelberg evaluating the outcomes of 97 patients treated with intraoperative electron radiation therapy for locally recurrent rectal cancer. The authors report 5-year central and local control of 54% and 41%, respectively. Univariate and multivariate analysis highlight the prognostic importance of obtaining an R0 resection for long term local and overall survival outcomes. While this study does not introduce any new significant findings, it builds upon the existing body of literature which demonstrates a role for IOERT for locally recurrent rectal cancer. The authors interestingly argue in light of the importance of obtaining an R0 resection, strong consideration should be given to reirradiation in this setting in conjunction with surgical resection and IOERT.

Some comments:

1) How were the patients for IOERT chosen? Were all patients with locally recurrent rectal cancer taken to surgery treated with IOERT, or were patients selected for IOERT based on preoperative imaging (i.e. pelvic side wall involvement, sacral involvement, etc?)

2) Why was the median dose for neoadjuvant chemoradiation 41.4 Gy, and not 50.4 Gy?

3) Was IOERT dose determined by intraoperative margin status? Was frozen pathologic assessment performed or available?

4) For Table 2 and Table 3, would specify cutoff used for age and time to FD to rec in univariate and multivariate analysis instead of writing "median".

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare I have no competing interests.