Reviewer’s report

Title: Long-Term Outcomes After Surgical Dissection of Inguinal Lymph Node Metastasis from Rectal or Anal Canal Adenocarcinoma

Version: 0 Date: 07 May 2019

Reviewer: Seth Felder

Reviewer's report:

Good manuscript, important to the field in clarifying regional vs distant and impact on prognosis. Survival is reported in the manuscript which appears to suggest inguinal disease may be considered locoregional disease, rather than metastatic.

Figure 1: nice photos but not necessary to print. The inguinal lymph node dissection appears to be a standard approach.

Figure 2: This is illustrative of the assumption of lymph node dissemination, however, must be described/labeled as speculative. The specific route of dissemination is not definitely understood.

Comment: The authors have explained within the manuscript the clinical dilemma distinguishing anal vs rectal adenocarcinoma. Location alone to the dentate is clinically relevant, however, it remains unclear whether these are the same 2 diseases, despite similar treatments.

Critical revision: The patient cohort spanned a long time interval (1986-2017), such that clinical staging for inguinal nodal disease likely changed with improvement in staging (pelvic MRI). The authors might consider comparing two different time periods to account for the change in staging/treatments. Because the study only selected patients with positive inguinal nodal disease, it should clarify the manner in which they were included. For example, were these all clinically positive nodes, detected on CT, PET, MRI, or all biopsy proven prior to formal radical oncologic inguinal lymph node dissection? Similarly, was the clinical lateral lymph node status known? From Table 1, 25% of patients LLN were not known, suggesting preoperatively they did not have suspicious lateral nodes. Also, Table 1 "depth of tumor invasion," does this represent cT or pT stage? The authors should describe their approach for these patients regarding neoadjuvant therapy. Did any patient receive neoadjuvant radiation, chemoradiation, or chemotherapy? At time of surgery, are the margins known? What was the circumferential radial margin for the various operations (APR, coloanal, and exenteration?) In addition, Table 1 reported 33% of T1/T2 lesions, and in Table 2, T1/2/3 all combined together. Would calculating T1/2 (intramural disease) have changed the findings?

Regarding neoadjuvant therapy, if administered, did radiation fields cover the inguinal basins? If the authors do not routinely prescribe neoadjuvant therapy for locally advanced disease prior to surgery, can they comment on the role of alternative strategies for local control---ie., adjuvant external beam
radiation or SBRT potentially. Morbidity/surgical complications are not reviewed in this paper, butinguinal nodal dissection, particularly in inguinal basins anticipated to likely receive radiation inWestern countries, may result in significant morbidity.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
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I am able to assess the statistics

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