Intraoperative Evaluation of a Hysterectomy for Suspected Endometrial Carcinoma

WHAT TO REPORT INTRAOPERATIVELY:

The following variables should be reported in every case because of their ability to predict outcome and guide the type of surgery.

- ***Histologic subtype (histotype)***
- ***Grade***
- ***Myometrial invasion*** (stage IA/IB) – estimate % involved, not just whether >/< 50%
- ***Lymphovascular invasion***
- ***Involvement of cervical stroma*** (stage II)
- ***Involvement of adnexa or uterine serosa*** (stage III)

Indicate whether the reported variables are based on microscopic or gross evaluation.

Grade endometrioid tumors. (*FIGO grade 1 or 2 (low grade) vs. FIGO grade 3 (high grade))*

Also note whether tumor is exclusively fundal (more likely to skip pelvic lymph nodes and go right to para-aortic nodes).

REASON FOR INTRAOP EVALUATION:

To guide the type of surgery. There are four options:

1. Hysterectomy alone

2. Hysterectomy with pelvic lymph node dissection (Hyst+Pelvic LND)

3. Hyst + Pelvic LND + Para-aortic LND

4. Hyst + Pelvic LND + Para-aortic LND + omentectomy

The decision is influenced by the aforementioned variables reported intraoperatively. The pre-operative biopsy/curettage provides only histotype and grade is usually not enough information to decide on extent of surgery. Thus, the intraoperative evaluation provides the missing variables that are needed to define how much more surgery should be performed immediately. The surgeon will integrate this intraoperative path data with intraop surgical findings and other clinical data (e.g. patient comorbidities) to make an immediate decision regarding the surgical plan.

OVERVIEW OF PROCEDURE:

1. Review Beaker for pre-operative biopsy diagnosis.

2. Gross evaluation of the unopened uterus for serosal tumor (including surface of ovaries/tubes, if present).

3. Standardized gross dissection (including Photos prior to slicing).

4. Gross evaluation for endometrial tumor and involvement of myometrium / cervix / adnexa.

5. *When appropriate:* Frozen section evaluation of are of most extensive growth beyond endometrium.

6. Render intraoperative diagnosis.

7. Documentation of relevant gross pathology and details of frozen section sampling on Gross Template.

8. Pin and fix specimen.

DETAILED PROCEDURE

Step 1: Review Beaker biopsy report. Sometimes biopsy findings may be too limited to confidently assign a subtype or a grade; conversely, sometimes there may be findings suggestive of >stage1A growth, such as necrosis or desmoplasia. This info helps guide what to look for in Hyst.

Step 2: Document presence or absence of grossly visible serosal tumor on uterus (and/or ovaries/tubes if present). Do FS if suspicious for tumor.

Step 3: Ink paracervical/radial surgical margin and cervical/vaginal cuff. Bivalve uterus*. If time allows, it is strongly advised to take a photo of the bivalved uterus before bread loafing*. Evaluate gross appearance of endometrium, endocervix, ectocervix, and myometrium. Document presence/absence of abnormalities. Using long bread knife, bread-loaf uterine body (not endocervix/ectocervix) in thin slices (about 0.5 cm) that run parallel to the right/left axis. Slice almost entirely all the way deep down to the serosa, but leave serosa intact. If fibroids are present, do not dissect these using separate slices; simply include them in the overall parallel bread-loaf slices and ensure that they are fully sliced down to nearly the serosa. If there is no gross mass/nodule in the endocervix, leave the uterus intact from the top of the endocervix to the ectocervix. If there is an endocervical lesion suspicious for stage II cancer, dissect using slices that are parallel to the length of the endocervical canal since this will allow you to better see the relationship of the lesion to endocervix versus lower uterine segment. Leave the ovaries/tubes intact without dissecting unless there is suspicion for stage IIIA cancer.

Step 4: Examine dissected specimen for the location of the endometrial mass, depth of

myoinvasion (if any), cervical invasion, adnexal invasion, serosal involvement. Document on gross template.

Step 5: Determine if FS needed. Especially in the early phase of gaining experience, it is better to perform FS to confirm gross impression of tumor stage and to evaluate for more aggressive component of tumor subtype or higher grade (particularly if suggested by biopsy). Also, if outside biopsy not reviewed at UC Davis and not strongly supported by either the microscopic comment or IHC, lean toward doing a frozen section. Select tissue for FS from the uterine body at the area most suspicious for deepest myoinvasion plus any areas suspicious for cervical/adnexal involvement.

Step 6: The intraoperative diagnosis should attempt to report all of the following variables. Indicate whether based on gross only or on FS. When uncertain, being descriptive with details or providing a differential diagnosis when uncertain is extremely helpful, to at least give the surgeon an idea of the range of possibilities. Communicating your uncertainty is important (sometimes it's hard to determine histotype or extent of myoinvasion).

Report these variables in the intraop diagnosis: *(see top of document)*

Step 7: Document relevant gross findings on the gross template (remember Step 2) so that the person completing the grossing knows what you saw freshly before and after dissection and knows exactly where you took FS samples from. Remember that tissue is hard to evaluate after fixation, so all the help that you can give by documentation is appreciated by the person who ultimately receives this specimen for completion, as well as the attending who is ultimately responsible for the case, medically and legally.

Step 8: Pin the bivalved uterus out, with careful attention to orienting and pinning the cervical/vaginal cuff margins. Fix in formalin immediately. As a final step, review the Gross Template and verify that you've written down all the relevant gross findings to help out the final gross on this case.