GENERAL GUIDELINE: Frozen sections on breast specimens, including sentinel lymph nodes, is generally not a good idea and should be reserved for special instances.

Sentinel Lymph node FS:

Breast surgeons may ask for FS on sentinel lymph node(s). Many believe that there should be only one sentinel lymph node (the first lymph node to drain from the breast tumor) but this is not the case. There may be one or more SLNs guided by both blue dye and radioactive colloid. If any one of multiple SLN shows metastatic carcinoma, you can stop additional SLN FS. Surgeons are essentially looking for macrometastasis so that they can perform a complete axillary LN dissection at the same OR setting.

Types of breast cancer LN metastases:

- Isolated tumor cells: focus $\leq 0.2$ mm or fewer than 200 cells are considered N0(i+)
- Micrometastases: focus $>0.2$ mm - 2 mm are N1mi
- Macrometastases: focus $> 2$ mm are N1
Procedure

1. Cut each lymph node into 2 mm intervals in longest axis

2. Make touch prep on all sides of SLN

3. Submit half of SLN or at least one largest area of the cut piece for FS (grossly suspicious area is the best)

4. Look for macromets and report: macrometastasis present.

5. Invasive lobular carcinoma metastatic to SLN is much more difficult than invasive ductal carcinoma. Make sure you do touch prep/smear along with FS.

6. If you are not sure, either for micromets or isolated tumor cells, report the uncertainty (surgeons would rather have false negative than false positive result; they can always go back to perform a full axillary LN dissection later). When in doubt, report:
   
   - No macrometastasis on one representative section; defer to permanent sections and IHC stains OR
   
   - Atypical cells present but no definite macrometastasis; defer to permanent and IHC stains
Breast Mass and Margin Gross FS:

Don’t do it! A FS on a lumpectomy margin is not recommended due to high fat composition leading to technical difficulty particularly with invasive lobular carcinoma. One surgeon in particular wants intra-op “ink and gross.” Luckily these happen infrequently.

Procedure

1. Ink breast tissue with 6 colors (UCLA standard protocol)

2. Bread-loaf into 3-5 mm intervals

3. Assess tumor to surgical margin grossly

4. Report Gross assessment (No FS done)

5. The Attending on the Breast Service is available for consultation