A 55-year-old lady with biopsy-proven melanoma, left lower back. According to the original pathology report, measurements were approximately 2 cm x 1 cm. Wide excision with sentinel node biopsy recommended. Options, procedures, risks, and benefits explained preoperatively and informed consent obtained.

**5/15/2019: NUCLEAR MEDICINE LYMPHOSCINTIGRAPHY**: Following the subcutaneous injection of Tc-99m sulfur colloid, static views were obtained over areas of interest. Radiotracer activity is noted at the injection site with typical lymphatic drainage to regional lymph nodes. There are 3 nodes marked on the skin site in the left axillary/scapular region. Node location was marked on the skin for surgical reference during biopsy.

**5/15/2019: Sentinel LN procedure**: Prior to this procedure, she underwent an injection of radionucleotide marker in the perimelanoma area. Initial imaging demonstrated activity in the left axillary region and left chest wall. The gamma probe was used to identify areas of increased activity and three separate areas were identified. The area which was highest near the left axilla was excised first. Using a gamma probe and visual inspection, I was able to identify two nodes in the axilla which were excised; these were superficial and deep and submitted with the sentinel lymph nodes. The third sentinel node was excised from the left chest wall inferior to the axillary region. Attention was then turned to the lower node which had been marked in the left chest wall at the junction of the breast and fatty tissue; two nodes were identified and removed.

**Wide excision**: The area prepped included the left back, chest wall, hip, and thigh. This was to allow for skin grafting if needed. Measurements were then taken around the margin circumferentially. I measured 2.2-cm in all directions. An elliptical incision was then made which incorporated the melanoma site. The area was excised down to the chest wall. The muscle tissue was spared.

The plastic surgeon was then called into the case for complex closure of wound, left lower back. There was a fairly large open area on the back which was about 5 cm in diameter. The wound margins were significantly undermined in order to gain enough laxity for closure.

**Referra**l: Due to the patient’s insurance, he was referred to Dr. XXX at XYZ for immunotherapy.

**PATH REPORT 5/15/2019**:

HIGHEST SENTINEL LYMPH NODE: Rare atypical melanocytes consistent with metastatic melanoma, see comment (1/1)

SENTINEL LYMPH NODE #2, LEFT CHEST WALL: One benign lymph node, negative for metastatic melanoma (0/1)

SENTINEL LYMPH NODE #3 LEFT AXILLA, DEEP: One benign lymph node, negative for metastatic melanoma (0/1)

SENTINEL LYMPH NODE #4, LEFT BREAST: Benign fibroadipose tissue, no lymph node is identified

SENTINEL LYMPH NODE #5, LEFT BREAST, DEEP: One benign lymph node, negative for metastatic melanoma (0/1)

EXCISION MELANOMA SITE, LEFT LOWER BACK, EXCISION WITH ORIENTATION:

- Focal residual melanoma in situ, completely excised (margins uninvolved by melanoma in situ)

- Scar consistent with previous biopsy site

COMMENT: The case was referred to an outside dermatology pathology specialist specifically regarding the significance of rare, small melanoma cells present in the lymph node. It was confirmed that these cells do represent isolated metastatic melanoma cells, and thus the lymph node would be considered positive. However, the significance of rare small, "bland" isolated melanoma cells in sentinel nodes is still unclear. Coincidentally, a very recent article published reveals that isolated immunohistochemistry positive cells in melanoma sentinel lymph nodes have apparently a similar prognosis as patient without any sentinel lymph node involvement.

**PCP office 4/24/2019**:

Shave biopsy, skin, back.

Diagnosis:

Malignant melanoma, nevoid type

Breslow measurement: at least 2.7mm, transected at the base

Clark’s level: IV, transected at the base

Ulceration: absent

Regression: not identified

Lymphocytic response: non-brisk

Mitotic index: 2/mm2

Lymphovascular channel involvement: not identified

Neurotropism: not identified

Satellite lesions: not identified

Margins: extending to deep and lateral margins.

AJCC staging: at least pT3a Nx (See Comment)

Comment:

On gross examination of the specimen, the tumor was noted to be transected at the base. Optimal pathologic evaluation of melanocytic lesions requires complete excision that incorporates the full thickness of the lesion removed intact.

Appropriate re-excision to ensure complete removal is recommended.

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| Melanoma Case Scenario | | | | | | | | | | | | | | | | | | | |
| Primary Site |  | | Clinical Grade | | | | |  | | | Clinical Tumor Size | | | | | | | |  |
| Laterality |  | | Pathological Grade | | | | |  | | | Pathological Tumor Size | | | | | | | |  |
| Histology |  | | Post Therapy Grade | | | | |  | | | Tumor Size Summary | | | | | | | |  |
| Behavior |  | |  | | | | | | | | | | | | | | | | |
| Stage Data items | | | | | | | | | | | | | | | | | | | |
| AJCC Stage | | | | | | | | | | | | | | | | | | | |
| Clinical T |  | | Pathological T | | | | |  | | | Post-therapy T | | | | | | | |  |
| cT Suffix |  | | pT Suffix | | | | |  | | | ypT Suffix | | | | | | | |  |
| Clinical N |  | | Pathological N | | | | |  | | | Post-therapy N | | | | | | | |  |
| cN Suffix |  | | pN Suffix | | | | |  | | | ypN Suffix | | | | | | | |  |
| Clinical M |  | | Pathological M | | | | |  | | | Post-therapy M | | | | | | | |  |
| Clinical Stage |  | | Pathological Stage | | | | |  | | | Post-therapy Stage | | | | | | | |  |
| SS2018/EOD | | | | | | | | | | | | | | | | | | | |
| Summary Stage 2018 | | |  | | | | | | | | | | | | | | | | |
| EOD Primary Tumor | |  | | | EOD Regional Nodes | | | |  | | | | | EOD Mets | | |  | | |
| Regional Nodes Positive | | |  | | | Regional Nodes Examined | | | | | | |  | | |  | | | |
|  | | | | | | | | | | | | | | | | | | | |
| SLN Positive | | |  | | | SLNs Examined | | | | | |  | | | |  | | | |
|  | | | | | | | | | | | | | | | | | | | |
| SSDI | | | | | | | | | | | | | | | | | | | |
| Breslow Tumor Thickness | | | |  | | | LDH Pre-Treatment Lab Value | | | | | | | |  | | |  | |
| Ulceration | | | |  | | | LDH Upper Limits of Normal | | | | | | | |  | | |  | |
| Mitotic Rate | | | |  | | | LDH Pre-Treatment Level | | | | | | | |  | | |  | |
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| Treatment | | | | | | | | | | | | | | | | | | | |
| Surgery Codes | | | | | |  | | | | **Systemic Therapy Codes** | | | | | | | | | | |
| Diagnostic Staging Procedure | | | | | |  | | | | Chemotherapy | | | | | | | | |  |
| Surgical Procedure of Primary Site | | | | | |  | | | | Hormone Therapy | | | | | | | | |  |
| Scope of Regional Lymph Node Surgery | | | | | |  | | | | Immunotherapy | | | | | | | | |  |
| Date of Sentinel LN Biopsy | | | | | |  | | | |  | | | | | | | | |  |
| Date of Regional LN Dissection | | | | | |  | | | |  | | | | | | | | |  |
| Surgical Procedure/ Other Site | | | | | |  | | | |  | | | | | | | | |  |

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| Melanoma Case Scenario | | | | | | | | | | | | | | | | | | | |
| Primary Site |  | | Clinical Grade | | | | |  | | | Clinical Tumor Size | | | | | | | |  |
| Laterality |  | | Pathological Grade | | | | |  | | | Pathological Tumor Size | | | | | | | |  |
| Histology |  | | Post Therapy Grade | | | | |  | | | Tumor Size Summary | | | | | | | |  |
| Behavior |  | |  | | | | | | | | | | | | | | | | |
| Stage Data items | | | | | | | | | | | | | | | | | | | |
| AJCC Stage | | | | | | | | | | | | | | | | | | | |
| Clinical T |  | | Pathological T | | | | |  | | | Post-therapy T | | | | | | | |  |
| cT Suffix |  | | pT Suffix | | | | |  | | | ypT Suffix | | | | | | | |  |
| Clinical N |  | | Pathological N | | | | |  | | | Post-therapy N | | | | | | | |  |
| cN Suffix |  | | pN Suffix | | | | |  | | | ypN Suffix | | | | | | | |  |
| Clinical M |  | | Pathological M | | | | |  | | | Post-therapy M | | | | | | | |  |
| Clinical Stage |  | | Pathological Stage | | | | |  | | | Post-therapy Stage | | | | | | | |  |
| SS2018/EOD | | | | | | | | | | | | | | | | | | | |
| Summary Stage 2018 | | |  | | | | | | | | | | | | | | | | |
| EOD Primary Tumor | |  | | | EOD Regional Nodes | | | |  | | | | | EOD Mets | | |  | | |
| Regional Nodes Positive | | |  | | | Regional Nodes Examined | | | | | | |  | | |  | | | |
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| SLN Positive | | |  | | | SLNs Examined | | | | | |  | | | |  | | | |
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| Treatment | | | | | | | | | | | | | | | | | | | |
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