Suggested Clinical Workflow for Screening and Imaging: Integrating AJCC Staging and Gene Expression Profiling

**Melanoma Diagnosis & Staging Completed per AJCC and NCCN Guidelines**

**AJCC Tumor Stage at Diagnosis**
- O (in situ)
- IA
- IB, IIA, IIB, IIC

**Sentinel Lymph Node Status**
- SLNB not indicated
- SLNB not performed
- SLNB negative
- SLNB positive (Stage III)

**Possible Rationale for GEP Testing**
- N/A
- GEP not indicated
- Class 1A
- Class 1B/2A
- Class 2B

**31-GEP Test result**
- N/A
- Increased frequency of follow-up, lower threshold for symptomatic imaging, consider SLNB
- Increased frequency of follow-up, consider multidisciplinary follow-up, consider baseline imaging and decreased threshold for symptomatic imaging, consider SLNB
- Review risk:benefit profile for adjuvant therapy with patient
- Consider encouraging adjuvant therapy (even in low-volume nodal disease)
- Strong consideration of adjuvant therapy

**Notes**—Adverse features resulting in microstaging uncertainty in Stage IA melanomas for the purposes of SLNB consideration include features such as positive deep margin, mitosis, lymphovascular invasion, mitotic rate >7/mm², regression, perineural invasion, and a Class 2 31-GEP test result. Stage III is not broken into sub-stages as the focus of the clinical impact is on Stage IIIa. Stage IV is not included because 31-GEP test is not clinically helpful to predict metastasis when it has already been detected.

Key—AJCC: American Joint Commission on Cancer; FP: false positive; GEP: gene expression profiling; SLNB: sentinel lymph node biopsy; N/A: not applicable; NCCN: National Comprehensive Cancer Network

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