Melanoma and mycosis fungoides AJCC staging

By Parin Pearl Rimtepathip, MD, and Janna Mieko Vassantachart, MD

**American Joint Committee on Cancer (AJCC) 8th Ed. - Melanoma Staging**

<table>
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<tr>
<th>Clinical staging</th>
<th>Pathologic staging (only differs for stage 3)</th>
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<tr>
<td>Stage 0 Tis N0 M0</td>
<td>3A T1a/b, T2a N1a, N2a M0</td>
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<tr>
<td>Stage 1A T1a N0 M0</td>
<td>3B T0, T1a/b, T2a N1b/c</td>
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<tr>
<td>1B T1b, T2a - -</td>
<td>T1a/b, T2a N2b -</td>
</tr>
<tr>
<td>Stage 2A T2b, T3a N0 M0</td>
<td>3B T2b, T3a N1a-c, N2a/b -</td>
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<tr>
<td>2B T3b, T4a - -</td>
<td>T2b, T4a N1a-c, N2a/b -</td>
</tr>
<tr>
<td>2C T4b - -</td>
<td>T4b N1a-c, N2a/b -</td>
</tr>
<tr>
<td>Stage 3 Any T N1 M0</td>
<td>3C T4b N1a-c, N2a/b -</td>
</tr>
<tr>
<td>Stage 4 Any T Any N M1</td>
<td>3D T4b N3a-c -</td>
</tr>
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</table>

**Definitions**

- **Primary Tumor (T)**
  - TX: Primary tumor cannot be assessed
  - T0: No evidence of primary tumor
  - Tis: Melanoma in situ
  - T1: ≤1.0
    - a: Breslow < 0.8 mm w/o ulceration
    - b: Breslow 0.8-1.0 mm w/o ulceration or ≤1.0 mm w/ ulceration
  - T2: 1.1-2.0
    - a: w/o ulceration
    - b: w/ ulceration
  - T3: 2.1-4.0
  - T4: >4.0

- **Regional Lymph Nodes (N)**
  - NX: Nodes cannot be assessed
  - N0: No regional metastases detected
  - N1: 0-1 node
    - a: no MSI, clinically occult
    - b: no MSI, clinically detected
    - c: MSI present, 0 nodes
  - N2: 2-3 nodes
    - a: no MSI, clinically occult
    - b: no MSI, clinically detected
    - 1 node
      - c: MSI present, detectable or occult
  - N3: >3 nodes
    - a: no MSI, all occult
    - b: no MSI, > 1 detected or matted
    - >1 node
      - c: MSI present, detectable or occult

- **Distant Metastasis (M)**
  - M0: No distant metastases detected
  - M1a-d: [a] Skin/subcutaneous/distant node, [b] lung, [c] other visceral sites, [d] brain
  - M1a-d (0): Not assessed
  - M1a-d (1): Normal
  - M1a-d (1): Elevated

*MSI refers to any satellite, locally recurrent, or in transit lesions.

**Quick tips for melanoma staging:**
- 8th Ed omits mitosis status and T1a is <0.8 mm rather than ≤1.0mm
- Clinical and pathologic staging (TNM) is the same except for stage 3
- Nodal involvement → at least stage 3
- Distant metastases → stage 4
Melanoma and mycosis fungoides AJCC staging (cont.)
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Mycosis fungoides staging

<table>
<thead>
<tr>
<th>Staging Classification</th>
<th>Stage 1A</th>
<th>1B</th>
<th>Stage 2A</th>
<th>2B</th>
<th>Stage 3A</th>
<th>3B</th>
<th>Stage 4A</th>
<th>4B</th>
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<tbody>
<tr>
<td>T1</td>
<td>N0</td>
<td>M0</td>
<td>T1-2</td>
<td>N1</td>
<td>T4</td>
<td>N0</td>
<td>T1-4</td>
<td>N0-3</td>
</tr>
<tr>
<td>T2</td>
<td>N0</td>
<td>M0</td>
<td>T3</td>
<td>N0-1</td>
<td></td>
<td></td>
<td>T1-4</td>
<td>N0-3</td>
</tr>
<tr>
<td>T3</td>
<td></td>
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</tr>
</tbody>
</table>

Definitions

Skin Tumor (T)
- **T1**: Limited patch/plaque (involving <10% of total skin surface)
- **T2**: Generalized patch/plaque (involving >10% of total skin surface)
- **T3**: Tumor(s)
- **T4**: Erythroderma (>90% BSA)

Regional lymph node (N)
- **N0**: No enlarged lymph nodes
- **N1**: Enlarged lymph nodes, histologically uninvolved
- **N2**: Enlarged lymph nodes, histologically involved (nodal architecture unaffected)
- **N3**: Enlarged lymph nodes, histologically involved (nodal architecture effaced)

Visceral involvement (M)
- **M0**: No visceral involvement
- **M1**: Visceral involvement

Blood (B)*
- **B0**: No circulating atypical (Sezary) cells or <5% of lymphocytes
- **B1**: Low blood tumor burden (>5% of lymphocytes are Sezary cells, but not B2)
- **B2**: High blood tumor burden (1000/mL Sezary cells and positive clone)

* Is not part of stage classification for AJCC [useful in ACS and EORTC]

Quick tips for MF staging:
- Nodal involvement → at least stage IIA
- Cutaneous tumors → at least stage IIB
- Erythroderma → at least stage IIIA
- Visceral involvement → stage IVB

References:

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