How AJCC Staging and the NCCN Guidelines Can Improve Our Management of Melanoma

Kenneth Linden, PhD, MD
Associate Professor
Co-Director, UC Irvine Pigmented Lesion Clinic
Co-Director, UC Irvine Melanoma Center
Department of Dermatology &
The Chao Family Comprehensive Cancer Center
University of California, Irvine

2009 AJCC Staging of Melanoma

- American Joint Committee on Cancer
- The guidelines for staging of melanoma were updated and published in the 7th edition of the AJCC Guidelines in 2009, to take effect in January, 2010.
- Previous updates were in 2002, and 1997.
Are they the 2009 or 2010 Guidelines?

- I don’t know.
- Apparently neither does the committee! Various papers call them the 2009 Guidelines\(^1\), and other papers call them the 2010 Guidelines\(^2\).
- The important thing is that you realize that they are both referring to exactly the same guidelines, that were published in 2009 in the 7\(^{th}\) edition of the AJCC Staging Manual and took effect in January of 2010.

---


What are the Important Changes to the Most Recent AJCC Melanoma Staging?

• Breslow depth remains a key criteria
• Mitotic rate (mitoses/mm² of dermal component) replaces Clark Level
• Clark Level no longer a significant criteria
• Ulceration, added in 2002 system, remains a dominant factor.

Important Changes to Most Recent AJCC Staging

• Changes for Stage III and Stage IV disease
  – The presence of microtumor burden (detected with immunohistochemistry) in lymph nodes important in stage III disease.
  – Elevated lactate dehydrogenase (LDH) levels in patients with distant metastatic disease.

How Do Changes to AJCC Melanoma Staging Impact Dermatologists’ Practices?

• It is important to realize that Breslow depth and ulceration remain key for early stages of melanoma.
• It is important to recognize that mitotic rate is a key factor in prognosis and staging and therefore a vital component of histopathology reports for melanoma.
Are There Weaknesses of the New AJCC Staging System?

• Measurement of mitotic rate is somewhat quirky and not as standardizable or reproducible as one would like.
• Lack of effective therapies other than surgery for all stages of melanoma limit the impact of staging on disease outcome.
Well, what is the current AJCC Staging System for Melanoma?

- As before, and for most cancers, based on the TNM system.
- We will concentrate on the dermatologist relevant portion.

**Definitions**

**Primary Tumor (T)**

- **TX**: Primary tumor cannot be assessed (for example, curettaged or severely regressed melanoma)
- **T0**: No evidence of primary tumor
- **Tis**: Melanoma in situ
- **T1**: Melanomas 1.0 mm or less in thickness
- **T2**: Melanomas 1.01–2.0 mm
- **T3**: Melanomas 2.01–4.0 mm
- **T4**: Melanomas more than 4.0 mm

**NOTE:** a and b subcategories of T are assigned based on ulceration and number of mitoses per mm², as shown below.
Looking Towards the Future of the AJCC Staging System for Melanoma

- Further refinement of staging will occur as the large database yields further information.
- As the molecular biology of melanoma becomes better understood, molecular characteristics will be increasingly important in predicting prognosis and in assigning stage.
- As effective therapies are developed for the different stages - adjuvant therapy, therapy for metastatic disease, etc., accurate staging will become even more important.
Using the AJCC Staging along With NCCN Guidelines

• NCCN = National Comprehensive Cancer Network
• NCCN guidelines are not only useful to dermatologists for melanoma, but especially for merkel cell carcinoma and cutaneous T-cell lymphoma.

NCCN Guidelines for Cancer Management

• Access does require registration
• Periodically updated, so good to review occasionally
Summary
• AJCC Staging for Melanoma was revised in 2009-2010.
• AJCC Staging is evidence based, following a large database of melanoma patients.
• The refinements to the staging further improve our ability to predict prognosis based on melanoma stage.
• The main dermatologist relevant change was the incorporation of mitotic rate into prognosis and staging.
• AJCC Staging may be used with NCCN Guidelines for management of melanoma.
• Use of these two excellent tools allows dermatologists to give excellent, uniform, standardized care to their melanoma patients.

Remember
Detecting skin cancer early saves lives.
References


