

## Melanoma Staging

### Microstaging

**Clark Level:** describes depth based on level of invasion. It is used in staging T1 lesions (see below).

- I: Intraepidermal
- II: In papillary dermis
- III: Fills papillary dermis
- IV: Reticular dermis
- V: Enters subcutaneous tissue

**Breslow Measurement:** the tumor thickness is measured using a micrometer. Lesions < 1mm are associated with lower metastasis rates and a better prognosis. The Breslow measurement is thought to be a better indicator of prognosis than the Clark level.

### The American Joint Committee on Cancer (AJCC) TNM System

#### T: Tumor Size

- TX: Primary tumor cannot be assessed
- T0: No evidence of primary tumor
- Tis: Melanoma in situ (Clark I)
- T1a: Up to 1mm thick, Clark II or III, no ulceration
- T1b: Up to 1mm thick, but either Clark IV or V or + ulceration
- T2a: 1.01 to 2mm, no ulceration
- T2b: 1.01 to 2mm, + ulceration
- T3a: 2.01 to 4mm, no ulceration
- T3b: 2.01 to 4mm, + ulceration
- T4a: > 4mm, no ulceration
- T4b: > 4mm, + ulceration

N: Node The node status is first staged clinically as well as pathologically by sentinel lymph node biopsy.

- NX: Regional lymph nodes cannot be assessed
- N0: No spread
- N1: + 1 node (a. micrometastasis, b. macrometastasis)
- N2: + 2-3 nodes (a. micrometastasis, b. macrometastasis, c. in-transit or satellite lesions)
- N3: + 4 or more nodes, matted nodes, or combinations of skin involvement/in-transit metastases with any lymph node involvement.

#### M: Metastasis

- MX: Distant metastases cannot be assessed
- M0: No distant metastases
- M1a: Distant metastases to skin, subcutaneous tissue, or distant lymph nodes
- M1b: Lung
- M1c: + elevated LDH or spread to any other organ

<b>Table: Stage Grouping and Associated Survival</b>			
<b>Stage</b>	<b>TNM</b>	<b>5-yr survival</b>	<b>10-yr survival</b>
0	Tis, N0, M0		
IA	T1a, N0, M0	95%	88%
IB	T1b, N0, M0	91%	83%
	T2a	89%	79%
IIA	T2b, N0, M0	77%	64%
	T3a	79%	64%
IIB	T3b, N0, M0	63%	51%
	T4a	67%	54%
IIC	T4b, N0, M0	45%	32%
IIIA	T1-4a, N1a, M0	70%	63%
	N2a	63%	57%
IIIB	T1-4b, N1a, M0	53%	38%
	N2a	50%	36%
	T1-4a, N1b, M0	59%	48%
	N2b	46%	39%
	T1-4a/b, N2c, M0	No data	No data
IIIC	T1-4b, N1b, M0	29%	24%
	N2b	24%	15%
	Any T, N3, M0	27%	18%
IV	Any T, Any N, M1a	19%	16%
	M1b	7%	3%
	M1c	10%	6%
Statistics for survival from Balch et al. J Clin Oncol 2001.			

## References:

- American Cancer Society [Internet]. [place unknown]: America Cancer Society, Inc.; 2009. Detailed Guide: Skin Cancer – Melanoma How Is Melanoma Staged?; [revised 2009 May 14; cited 2009 May 31]; [about 6 p.]. Available from: [http://www.cancer.org/docroot/CRI/content/CRI\\_2\\_4\\_3X\\_How\\_is\\_melanoma\\_staged\\_50.asp?sitearea=](http://www.cancer.org/docroot/CRI/content/CRI_2_4_3X_How_is_melanoma_staged_50.asp?sitearea=)
- Balch CM, Buzaid AC, Soong SJ, Atkins MB, Cascinelli N, Coit DG, Fleming ID, Gershenwald JE, Houghton A Jr, Kirkwood JM, McMasters KM, Mihm MF, Morton DL, Reintgen DS, Ross MI, Sober A, Thompson JA, Thompson JF. Final Version of the American Joint Committee on Cancer Staging System for Cutaneous Melanoma. J Clin Oncol. 2001;19(16):3635-48.