30

Merkel Cell Carcinoma

(Staging for Merkel Cell of the eyelid [C44.1] is not included in this chapter – see Chap. 48, "Carcinoma of the Eyelid")

At-A-Glance

SUMMARY OF CHANGES

- This is the first staging chapter specific for Merkel cell carcinoma. Merkel cell carcinoma was previously included in the "Carcinoma of the Skin" chapter

ANATOMIC STAGE/PROGNOSTIC GROUPS

Patients with primary Merkel cell carcinoma with no evidence of regional or distant metastases (either clinically or pathologically) are divided into two stages: Stage I for primary tumors ≤2 cm in size and Stage II for primary tumors >2 cm in size. Stages I and II are further divided into A and B substages based on method of nodal evaluation. Patients who have pathologically proven node negative disease (by microscopic evaluation of their draining lymph nodes) have improved survival (substaged as A) compared with those who are only evaluated clinically (substaged as B). Stage II has an additional substage (IIC) for tumors with extracutaneous invasion (T4) and negative node status regardless of whether the negative node status was established microscopically or clinically. Stage III is also divided into A and B categories for patients with microscopically positive and clinically occult nodes (IIIA) and macroscopic nodes (IIIB). There are no subgroups of Stage IV Merkel cell carcinoma.

Stage 0	Tis	N0	M0
Stage IA	T1	pN0	M0
Stage IB	T1	cN0	M0
Stage IIA	T2/T3	pN0	M0
Stage IIB	T2/T3	cN0	M0
Stage IIC	T4	N0	M0
Stage IIIA	Any T	N1a	M0
Stage IIIB	Any T	N1b/N2	M0
Stage IV	Any T	Any N	M1

ICD-O-3 TOPOGRAPHY CODES

C44.0 Skin of lip, NOS
C44.2 External ear
C44.3 Skin of other and unspecified parts of face
C44.4 Skin of scalp and neck
C44.5 Skin of trunk
C44.6 Skin of upper limb and shoulder
C44.7 Skin of lower limb and hip
C44.8 Overlapping lesion of skin
C44.9 Skin, NOS
C51.0 Labium majus
C51.1 Labium minus
C51.2 Clitoris
C51.8 Overlapping lesion of vulva
C51.9 Vulva, NOS
C60.0 Prepuce
C60.1 Glans penis
C60.2 Body of penis
C60.8 Overlapping lesion of penis
C60.9 Penis, NOS
C63.2 Scrotum, NOS

ICD-O-3 HISTOLOGY CODE RANGES

8247

INTRODUCTION

Merkel cell carcinoma (MCC) is a relatively rare, potentially aggressive primary cutaneous neuroendocrine carcinoma, originally described by Tang and Toker in 1972 as trabecular carcinoma.[1] The mortality rate is twice that observed in melanoma (33% vs. 15%). Although the molecular pathogenesis remains largely unknown, ultraviolet radiation and immune suppression are likely significant predisposing factors. The identification of a novel polyomavirus termed *Merkel cell polyomavirus* in the majority of MCC tumors suggests a viral component in many cases.[2] Merkel cell carcinoma occurs most commonly on sun-exposed skin in fair-skinned individuals older than 50 years with a slight male predominance.[3,4] An increased incidence is also observed in patients with HIV infection, leukemias, and organ transplantation.[4–6] Merkel cell carcinoma is increasing in frequency, rising from 0.15 cases per 100,000 in 1986 to 0.44 cases per 100,000 in 2001. Much of this increase in reported frequency is likely due to increased recognition and improved techniques for diagnosis.[7] Currently in the United States, approximately 1,500 cases of MCC are diagnosed annually.[8] As the US population ages and improved transplantation regimens prolong the lives of organ transplant recipients, the incidence of MCC will likely continue to rise.

Merkel cell carcinoma has a nonspecific clinical presentation, though rapid growth of a firm, red to violaceous, nontender papule or nodule is often noted.[4] Diagnosis is made via biopsy, almost invariably with the aid of immunohistochemistry, classically demonstrating a peri-nuclear dot pattern of cytokeratin-20 staining. The majority of patients present with clinically localized disease. However, the disease can rapidly spread to regional and distant sites. The regional draining nodal basin is the most common site for recurrence.[9] The natural history of the disease is variable but heavily dependent on the stage at time of diagnosis.

Five different staging systems for Merkel cell carcinoma have been described in the literature and all are currently in use.[10–14] Depending on the system used, Stage III MCC could represent local, nodal, or metastatic disease. This situation impedes effective patient–physician communication, data comparison, and outcomes analysis. Therefore, development of a standardized, data-driven staging system is important for improving clinical care and research in this disease. Moreover, a separate staging system for MCC is appropriate given its unique behavior compared with other malignancies that will remain in the "Cutaneous Squamous Cell Carcinoma and other Cutaneous Carcinomas" staging chapter (see Chap. 29). This new staging system is based on an analysis of over 4,700 patients using the National Cancer Database as well as extensive review of the literature.

ANATOMY

Primary Sites. Merkel cell carcinoma is postulated to arise from the Merkel cell, a neuroendocrine cell of the skin.[1] MCC can occur anywhere on the skin but arises most often in sun-exposed areas. It occurs most commonly on the head and neck, followed by the extremities. In 14% of cases, the primary site remains unknown with MCC presentation in nodal or visceral sites.[4]

Regional Lymph Nodes. The draining regional lymph nodes are the most common site of metastasis. Regional lymph node metastasis occurs relatively frequently and early, even in the absence of deep local extension or large primary tumor size. Thirty-two percent of clinically negative draining lymph node basins were in fact positive for microscopic metastases as revealed by sentinel or elective lymphadenectomy.[15] Intralymphatic "in transit" regional metastases also occur but are uncommon. For MCC, an in transit metastasis is defined as a tumor distinct from the primary lesion and located either (1) between the primary lesion and the draining regional lymph nodes or (2) distal to the primary lesion. In contrast to melanoma, for MCC there is no separate subclassification of in transit metastases based on distance from the primary (i.e., no *satellite* metastasis classification). By convention, the term "regional nodal metastases" refers to disease confined to one nodal basin or two contiguous nodal basins, as in patients with nodal disease in combinations of femoral/iliac, axillary/supraclavicular, or cervical/supraclavicular metastases or in primary truncal disease with axillary/femoral, bilateral axillary, or bilateral femoral metastases.

Metastatic Sites. Merkel cell carcinoma can metastasize to virtually any organ site. Metastases occur most commonly to distant lymph nodes, followed by the liver, lung, bone, and brain.[16]

RULES FOR CLASSIFICATION

The primary difference between the definitions of clinical and pathologic nodal staging is whether the regional lymph nodes were staged by clinical/radiologic exam only or by pathologic exam (after partial or complete lymphadenectomy).

Clinical Staging. Clinical staging is defined as regional lymph nodes that are staged by clinical inspection and palpation of the involved area and the regional lymph nodes and/or by radiologic studies. For cases without documentation of abnormal regional nodes on physical exam, patients should be considered to not have macroscopic nodal disease.

Pathologic Staging. Pathologic staging is defined as regional lymph nodes that are staged by focused (sentinel lymph node biopsy), therapeutic, or complete lymphadenectomy. With regard to Merkel cell carcinoma, the distinction between clinical vs. pathologic staging is highly significant. The natural history of MCC is variable and dependent on the pathologic stage at time of presentation.

Sentinel lymph node biopsy should be performed routinely on MCC patients, as approximately 32% of patients without palpable lymph nodes will have positive sentinel lymph node biopsies.[15] Pathologic staging with negative sentinel lymph node biopsy at time of diagnosis is a predictor of improved survival.[12] Despite these issues, approximately two-thirds of MCC patients captured in the National Cancer Database did not have pathologic staging of the regional nodes.

PROGNOSTIC FEATURES AND SURVIVAL RESULTS

Survival in Merkel cell carcinoma is based on stage at presentation (Figure 30.1). Overall survival relative to an age- and sex-matched population was determined using 4,700 Merkel cell carcinoma patients in the National Cancer Database registry (manuscript in preparation). Tumor size is a continuous variable with increasing tumor size correlating with modestly poorer prognosis (Figure 30.2). True lymph node negativity by pathologic evaluation portends a better prognosis compared with patients whose lymph nodes are only evaluated by clinical or radiographic examination (Figure 30.3). This is in large part likely due to the high rate (33%) of false negative nodal determination by clinical exam alone.[15] Thus, patients should have pathologic evaluation of the draining nodal basin to most accurately predict survival and guide optimal therapy. Percent relative survival based on stage is shown in Figure 30.4.

Profound immune suppression, such as in HIV/AIDS, chronic lymphocytic leukemia, or solid organ transplantation have all been associated with worse survival in MCC.[6,17] Further, immunosuppressed patients frequently present with more advanced disease.[4]

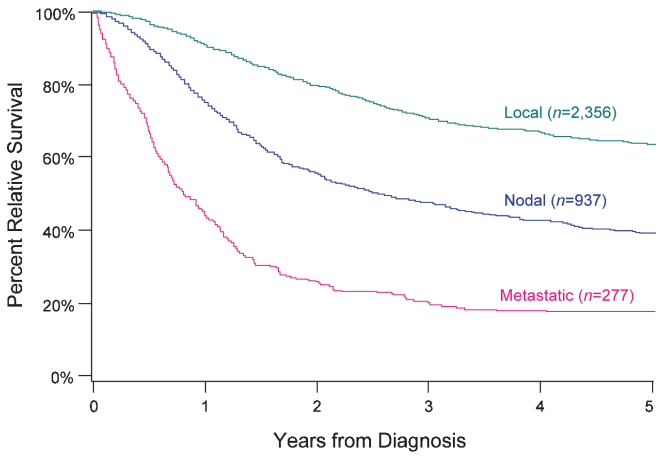

FIGURE 30.1. Relative survival for Merkel cell carcinoma by extent of disease at time of diagnosis. Percent relative survival was calculated for cases in the National Cancer Database using age- and sex-matched control data from the Centers for Disease Control and Prevention.

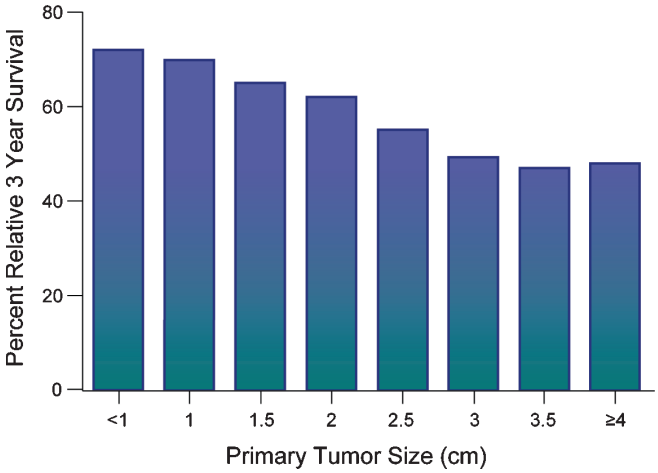

FIGURE 30.2. Three-year relative survival for Merkel cell carcinoma based on primary tumor dimension. While increased tumor dimension is associated with worse prognosis, these differences were modest, suggesting that tumor size alone is a poor predictor of survival. Total number of patients was 3,297, and individual groups were as follows: <1 cm = 517, 1 cm = 641, 1.5 cm = 519, 2 cm = 432, 2.5 cm = 288, 3 cm = 291, 3.5 cm = 123, ≥4 cm = 486.

DEFINITIONS OF TNM

Those patients with MCC presentations where the primary tumor cannot be assessed should be categorized as TX. Patients with Merkel cell carcinoma in situ are categorized as Tis. The T category of MCC is classified primarily by measuring the maximum dimension of the tumor: 2 cm or less (T1), greater than 2 cm but not more than 5 cm (T2), and greater

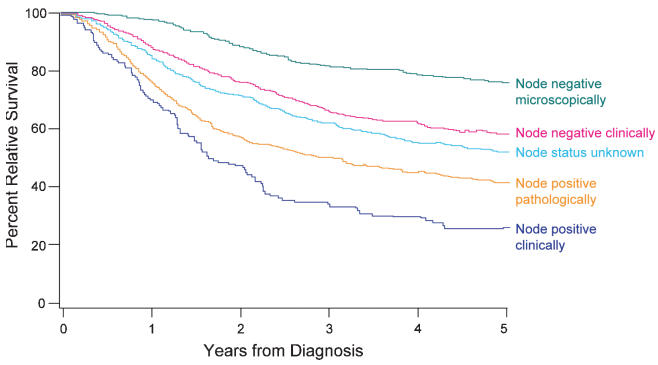

FIGURE 30.3. Relative survival among 4,426 Merkel cell carcinoma patients by node status. Percent relative survival was calculated for cases in the National Cancer Database using age- and sex-matched control data from the Centers for Disease Control and Prevention. Relative survival curves shown are divided into node negative patients (*top two lines*), nodes status unknown (*middle line*), and node positive patients (*bottom two lines*). The *curve* indicated by "Node positive pathologically" includes pathologic node positive patients with clinical node status negative or unknown. Total number of patients was 4,426, and individual groupings were as follows: node negative microscopically = 630, node negative clinically = 1,726, node status unknown = 1,134, node positive pathologically = 794, node positive clinically = 143.

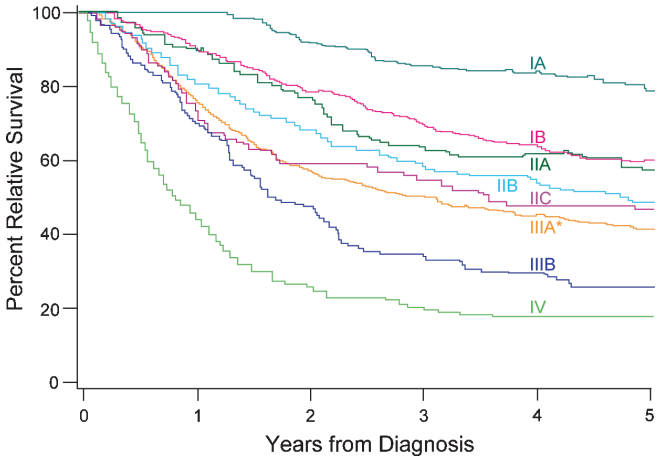

FIGURE 30.4. Relative survival for 2,856 Merkel cell carcinoma patients by stage. Percent relative survival was calculated for cases in the National Cancer Database using age- and sex-matched control data from the Centers for Disease Control and Prevention. Stages are as indicated in the figure except for Stage IIIA which could not be derived using this dataset. The *curve* marked "IIIA*" represents pathologically node positive patients, with the clinical node status unknown or negative. It is anticipated that true Stage IIIA patients (clinical node status negative) have better survival than the line marked with "IIIA*." Total number of patients was 2,856, and individual substages were as follows: IA = 266, IB = 754, IIA = 124, IIB = 414, IIC = 84, IIIA* = 794, IIIB = 143, IV = 277.

than 5 cm (T3). Extracutaneous invasion by the primary tumor into bone, muscle, fascia, or cartilage is classified as T4. Inclusion of 2 cm MCC tumors as T1 is consistent with the prior AJCC staging system but differs from other frequently used MCC staging systems[12,14] that categorize 2 cm tumors as T2. The breakdown of T category is conserved from the prior version of AJCC staging for "Carcinoma of the Skin."

Regional metastases most commonly present in the regional lymph nodes. A second staging definition is related to nodal tumor burden: microscopic vs. macroscopic. Therefore, patients without clinical or radiologic evidence of lymph node metastases but who have pathologically documented nodal metastases are defined by convention as exhibiting "microscopic" or "clinically occult" nodal metastases. In contrast, MCC patients with both clinical evidence of nodal metastases *and* pathologic examination confirming nodal metastases are defined by convention as having "macroscopic" or "clinically apparent" nodal metastases. Nodes clinically positive by exam and negative by pathology would be classified as pN0. Clinically positive nodes in the draining nodal basin that are assumed to be involved with Merkel cell carcinoma but are without pathologic confirmation (no pathology performed) should be classified as N1b and the pathologic classification would be NX. Then in determining the stage grouping, it would be Stage IIIB defaulting to the higher N category.

Distant metastases are defined as metastases that have spread beyond the draining lymph node basin, including cutaneous, nodal, and visceral sites.

Primary Tumor (T)

TX	Primary tumor cannot be assessed
T0	No evidence of primary tumor (e.g., nodal/metastatic presentation without associated primary)
Tis	In situ primary tumor
T1	Less than or equal to 2 cm maximum tumor dimension
T2	Greater than 2 cm but not more than 5 cm maximum tumor dimension
T3	Over 5 cm maximum tumor dimension
T4	Primary tumor invades bone, muscle, fascia, or cartilage

Regional Lymph Nodes (N)

NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
cN0	Nodes negative by clinical exam* (no pathologic node exam performed)
pN0	Nodes negative by pathologic exam
N1	Metastasis in regional lymph node(s)
N1a	Micrometastasis**
N1b	Macrometastasis***
N2	In transit metastasis****

*Clinical detection of nodal disease may be via inspection, palpation, and/or imaging.

**Micrometastases are diagnosed after sentinel or elective lymphadenectomy.

***Macrometastases are defined as clinically detectable nodal metastases confirmed by therapeutic lymphadenectomy or needle biopsy.

****In transit metastasis: a tumor distinct from the primary lesion and located either (1) between the primary lesion and the draining regional lymph nodes or (2) distal to the primary lesion.

Distant Metastasis (M)

M0	No distant metastasis
M1	Metastasis beyond regional lymph nodes
M1a	Metastasis to skin, subcutaneous tissues or distant lymph nodes
M1b	Metastasis to lung
M1c	Metastasis to all other visceral sites

ANATOMIC STAGE/PROGNOSTIC GROUPS

Patients with primary Merkel cell carcinoma with no evidence of regional or distant metastases (either clinically or pathologically) are divided into two stages: Stage I for primary tumors ≤2 cm in size and Stage II for primary tumors >2 cm in size. Stages I and II are further divided into A and B substages based on method of nodal evaluation. Patients who have pathologically proven node

negative disease (by microscopic evaluation of their draining lymph nodes) have improved survival (substaged as A) compared to those who are only evaluated clinically (substaged as B). Stage II has an additional substage (IIC) for tumors with extracutaneous invasion (T4) and negative node status regardless of whether the negative node status was established microscopically or clinically. Stage III is also divided into A and B categories for patients with microscopically positive and clinically occult nodes (IIIA) and macroscopic nodes (IIIB). There are no subgroups of Stage IV Merkel cell carcinoma.

Stage 0	Tis	N0	M0
Stage IA	T1	pN0	M0
Stage IB	T1	cN0	M0
Stage IIA	T2/T3	pN0	M0
Stage IIB	T2/T3	cN0	M0
Stage IIC	T4	N0	M0
Stage IIIA	Any T	N1a	M0
Stage IIIB	Any T	N1b/N2	M0
Stage IV	Any T	Any N	M1

PROGNOSTIC FACTORS (SITE-SPECIFIC FACTORS)
(Recommended for Collection)

Required for staging	None
Clinically significant	Measured thickness (depth) Tumor base transection status Profound immune suppression Tumor infiltrating lymphocytes in the primary tumor (TIL) Growth pattern of primary tumor Size of tumor nests in regional lymph nodes Clinical status of regional lymph nodes Regional lymph nodes pathological extracapsular extension Isolated tumor cells in regional lymph node(s)

HISTOLOGIC GRADE (G)

Histologic grade is not used in the staging of Merkel cell carcinoma.

HISTOPATHOLOGIC TYPE

While several distinct morphologic patterns have been described for MCC, these have not been reproducibly found to be of prognostic significance. These histologic subtypes include: intermediate type (most common), small cell type (second most common), and trabecular type (least common but most characteristic pattern of MCC).

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MERKEL CELL CARCINOMA STAGING FORM

CLINICAL *Extent of disease before any treatment*	STAGE CATEGORY DEFINITIONS		PATHOLOGIC *Extent of disease through completion of definitive surgery*
❒ y clinical–staging completed after neoadjuvant therapy but before subsequent surgery	**TUMOR SIZE:** _____	**LATERALITY:** ☐ midline ☐ left ☐ right ☐ bilateral	❒ y pathologic – staging completed after neoadjuvant therapy AND subsequent surgery
	PRIMARY TUMOR (T)		
❑ TX	Primary tumor cannot be assessed		❑ TX
❑ T0	No evidence of primary tumor		❑ T0
❑ Tis	*In situ* primary tumor		❑ Tis
❑ T1	Less than or equal to 2 cm maximum tumor dimension		❑ T1
❑ T2	Greater than 2 cm but not more than 5 cm maximum tumor dimension		❑ T2
❑ T3	Over 5 cm maximum tumor dimension		❑ T3
❑ T4	Primary tumor invades bone, muscle, fascia, or cartilage		❑ T4
	REGIONAL LYMPH NODES (N)		
❑ NX	Regional lymph nodes cannot be assessed		❑ NX
❑ N0	No regional lymph node metastasis		❑ N0
	Nodes negative by clinical exam* (no pathologic node exam performed)		❑ cN0
	Nodes negative by pathologic exam		❑ pN0
❑ N1	Metastasis in regional lymph node(s)		❑ N1
	Micrometastasis**		❑ N1a
	Macrometastasis***		❑ N1b
❑ N2	In transit metastasis ****		❑ N2
	*Clinical detection of nodal disease may be via inspection, palpation and/or imaging **Micrometastases are diagnosed after sentinel or elective lymphadenectomy ***Macrometastases are defined as clinically detectable nodal metastases confirmed by therapeutic lymphadenectomy or needle biopsy ****In transit metastasis: a tumor distinct from the primary lesion and located either 1) between the primary lesion and the draining regional lymph nodes or 2) distal to the primary lesion		
	DISTANT METASTASIS (M)		
❑ M0	No distant metastasis (no pathologic M0; use clinical M to complete stage group)		
❑ M1	Metastasis beyond regional lymph nodes		❑ M1
❑ M1a	Metastasis to skin, subcutaneous tissues or distant lymph nodes		❑ M1a
❑ M1b	Metastasis to lung		❑ M1b
❑ M1c	Metastasis to all other visceral sites		❑ M1c

ANATOMIC STAGE • PROGNOSTIC GROUPS

CLINICAL

GROUP	T	N	M
❑ 0	Tis	N0	M0
❑ IB	T1	N0	M0
❑ IIB	T2/T3	N0	M0
❑ IIC	T4	N0	M0
❑ IIIB	Any T	N1b/N2	M0
❑ IV	Any T	Any N	M1
❑ Stage unknown			

PATHOLOGIC

GROUP	T	N	M
❑ 0	Tis	N0	M0
❑ IA	T1	pN0	M0
❑ IB	T1	cN0	M0
❑ IIA	T2/T3	pN0	M0
❑ IIB	T2/T3	cN0	M0
❑ IIC	T4	N0	M0
❑ IIIA	Any T	N1a	M0
❑ IIIB	Any T	N1b/N2	M0
❑ IV	Any T	Any N	M1
❑ Stage unknown			

HOSPITAL NAME/ADDRESS	PATIENT NAME/INFORMATION

(continued on next page)

MERKEL CELL CARCINOMA STAGING FORM

PROGNOSTIC FACTORS (SITE-SPECIFIC FACTORS)

REQUIRED FOR STAGING: None

CLINICALLY SIGNIFICANT:

Measured Thickness (Depth) _____
Tumor Base Transection Status _____
Profound Immune Suppression _____
Tumor Infiltrating Lymphocytes in the Primary Tumor (TIL) _____
Growth Pattern of Primary Tumor _____
Size of tumor nests in regional lymph nodes _____
Clinical Status of Regional Lymph Nodes _____
Regional Lymph Nodes Pathological Extracapsular Extension _____
Isolated Tumor Cells in Regional Lymph Node(s) _____

Histologic Grade (G) *(also known as overall grade)*

Histologic grade is not used in the staging of Merkel cell carcinoma.

ADDITIONAL DESCRIPTORS

Lymphatic Vessel Invasion (L) and Venous Invasion (V) have been combined into Lymph-Vascular Invasion (LVI) for collection by cancer registrars. The College of American Pathologists' (CAP) Checklist should be used as the primary source. Other sources may be used in the absence of a Checklist. Priority is given to positive results.

- ❑ Lymph-Vascular Invasion Not Present (absent)/Not Identified
- ❑ Lymph-Vascular Invasion Present/Identified
- ❑ Not Applicable
- ❑ Unknown/Indeterminate

Residual Tumor (R)

The absence or presence of residual tumor after treatment. In some cases treated with surgery and/or with neoadjuvant therapy there will be residual tumor at the primary site after treatment because of incomplete resection or local and regional disease that extends beyond the limit of ability of resection.

- ❑ RX Presence of residual tumor cannot be assessed
- ❑ R0 No residual tumor
- ❑ R1 Microscopic residual tumor
- ❑ R2 Macroscopic residual tumor

General Notes:
For identification of special cases of TNM or pTNM classifications, the "m" suffix and "y," "r," and "a" prefixes are used. Although they do not affect the stage grouping, they indicate cases needing separate analysis.

m suffix indicates the presence of multiple primary tumors in a single site and is recorded in parentheses: pT(m)NM.

General Notes (continued):

y prefix indicates those cases in which classification is performed during or following initial multimodality therapy. The cTNM or pTNM category is identified by a "y" prefix. The ycTNM or ypTNM categorizes the extent of tumor actually present at the time of that examination. The "y" categorization is not an estimate of tumor prior to multimodality therapy.

r prefix indicates a recurrent tumor when staged after a disease-free interval, and is identified by the "r" prefix: rTNM.

a prefix designates the stage determined at autopsy: aTNM.

surgical margins is data field recorded by registrars describing the surgical margins of the resected primary site specimen as determined only by the pathology report.

neoadjuvant treatment is radiation therapy or systemic therapy (consisting of chemotherapy, hormone therapy, or immunotherapy) administered prior to a definitive surgical procedure. If the surgical procedure is not performed, the administered therapy no longer meets the definition of neoadjuvant therapy.

❑ Clinical stage was used in treatment planning (describe): _____

❑ National guidelines were used in treatment planning ❑ NCCN ❑ Other (describe): _____

_____

_____

Physician signature Date/Time

HOSPITAL NAME/ADDRESS	PATIENT NAME/INFORMATION

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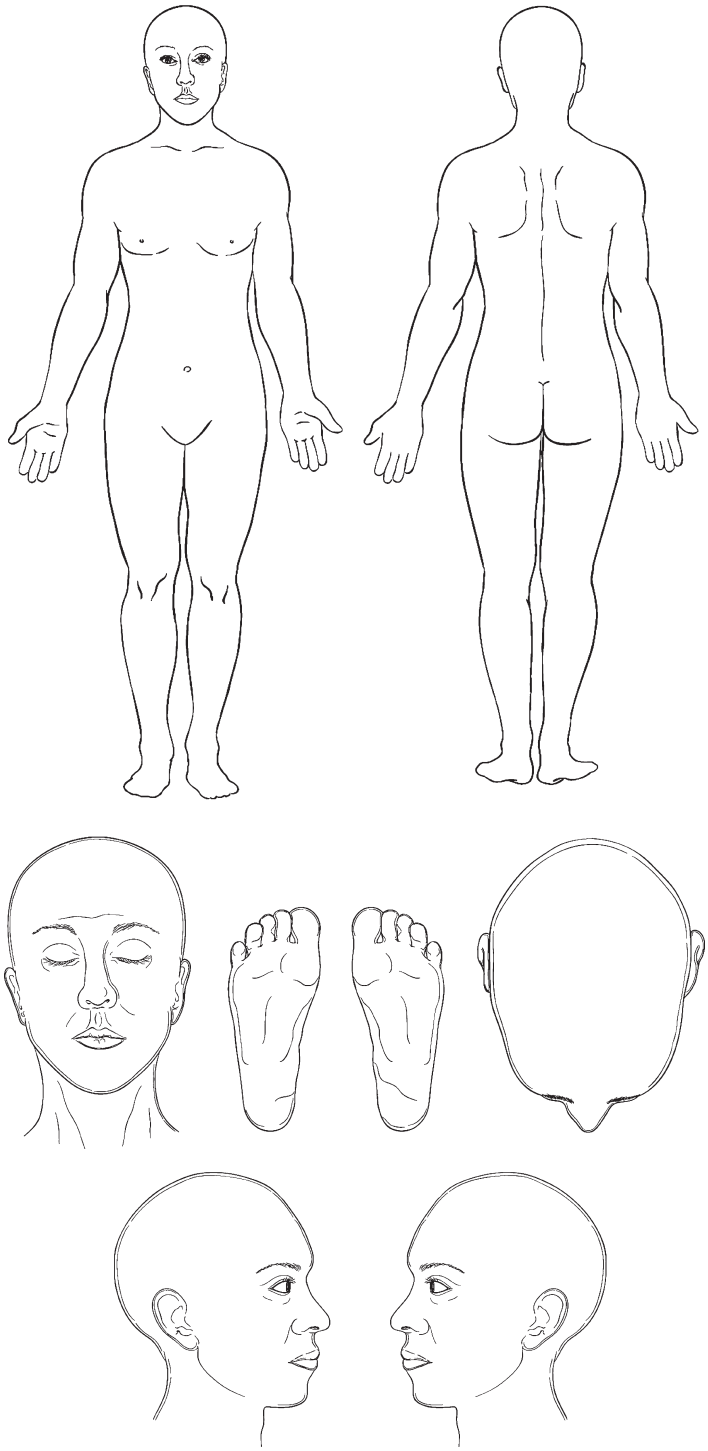
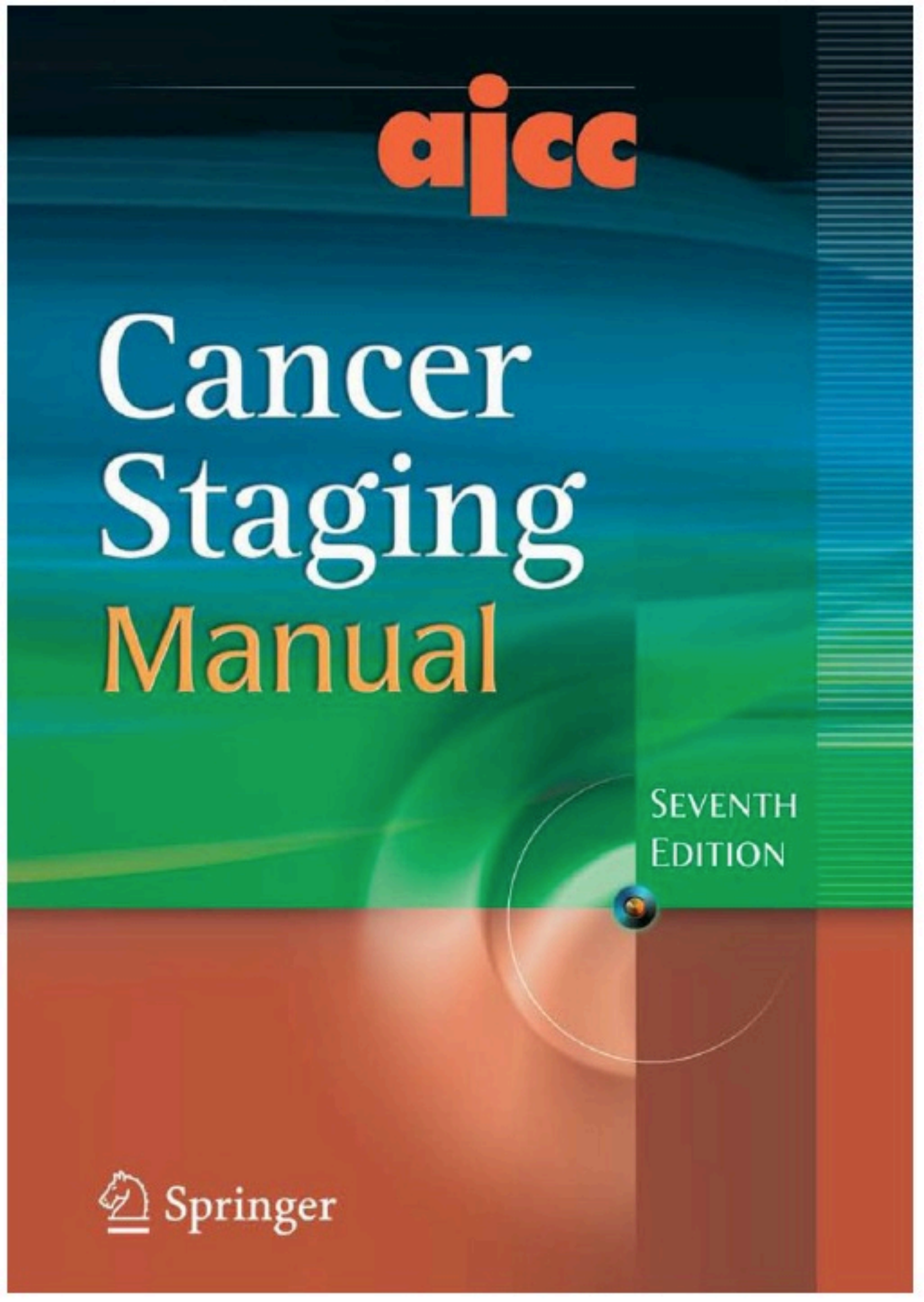
MERKEL CELL CARCINOMA STAGING FORM

Illustration

Indicate on diagram primary tumor and regional nodes involved.



HOSPITAL NAME/ADDRESS	PATIENT NAME/INFORMATION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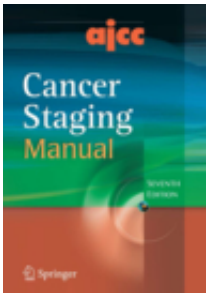

AJCC Cancer Staging Manual
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Usually ships in 3-4 weeks.

$64.95

About this book

- The AJCC Cancer Staging Manual (with staging forms included) is the gold standard to help the cancer patient management team determine the correct stage for patients and allowing the most appropriate care plan
- The AJCC Cancer Staging Handbook is the gold standard to help the cancer patient management team determine the correct stage for patients and allowing the most appropriate care plan

The *AJCC Cancer Staging Manual* and *Handbook*, prepared by the American Joint Committee on Cancer, are used by physicians and health care professionals throughout the world to facilitate the uniform description and reporting of neoplastic diseases. Proper classification and staging is essential for the physician to assign proper treatment, evaluate results of management and clinical trials, and to serve as the standard for local, regional and international reporting on cancer incidence and outcome.

The Seventh Edition of the *AJCC Cancer Staging Manual* brings together all the currently available information on staging of cancer at various anatomic sites and incorporates newly acquired knowledge on the etiology and pathology of cancer. As knowledge of cancer biology expands, cancer staging must incorporate these advances. The current revision provides evidence-based staging based upon the established tenets of TNM classification supplemented by selected molecular markers. Relevant markers supported by evidence and of sufficient impact for treatment decisions have been included to define stage, for example Gleason's Score and PSA in prostate cancer.

Organized by disease site into 57 comprehensive chapters, the Seventh Edition features much-anticipated, major revisions to many chapters including breast, colon, prostate, kidney, and others. There are new primary site chapters for extrahepatic bile ducts, distal bile duct, cutaneous squamous cell carcinoma, Merkel cell carcinoma, and the adrenal gland plus a vastly expanded section on ophthalmologic malignancies.

User-friendly enhancements include:

• a revised and expanded presentation of the principles and rules of TNM staging

• a concise summary of changes in the TNM classification and "Staging at a Glance" opening each chapter to provide a snapshot of staging and coding details

• numerous new line drawings illustrating key sites throughout the text

• full color text to highlight elements of TNM, stage groupings and prognostic factors

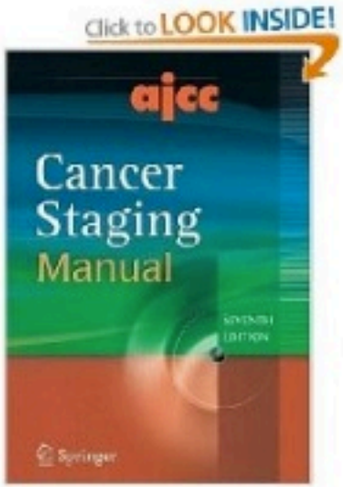
• a revised user friendly "Staging Form"

• a CD-ROM packaged with each Manual containing printable Staging Forms

The Seventh Editions of the *AJCC Cancer Staging Manual* and *Handbook* remain the essential references for oncologists, pathologists, surgeons, cancer registrars and medical professionals worldwide to ensure that all those taking care of cancer patients are fully versed in the language of cancer staging.

Written for:
Surgeons, oncologists, pathologists, cancer registrars

Keywords:
- AJCC



AJCC Cancer Staging Manual (Edge, AJCC Cancer Staging Manual) (Paperback)

~ Stephen B. Edge (Editor), David R. Byrd (Editor), Carolyn C. Compton (Editor), April G. Fritz (Editor), Frederick L. Greene (Editor), Andrew Trotti (Editor)

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