Subject: Mohs' Micrographic Surgery (MMS)

Background:

Mohs' Micrographic Surgery is a specialized surgical technique for the thorough removal of complex and ill-defined skin cancers. The known tumor is excised with a narrow margin and immediately examined under a microscope to assess if and where it extends beyond the excision. Those extensions are themselves excised and examined in an iterative process ending when no signs of cancer are visible in examination of the cut surface.

Policy and Coverage Criteria:

Harvard Pilgrim Health Care (HPHC) considers Mohs' surgery as reasonable and medically necessary when performed by an ACMS-certified dermatologist and documentation confirms ANY of the following:

- Basal cell carcinoma (BCC) in ANY of the following locations:
  - Mask areas of the face (central face, eyelids [including inner/outer canthi], eyebrows, nose, lips [cutaneous/mucosal/vermillion], chin, ear and periauricular skin/sulci, temple), genitalia (including perineal and perianal areas, excluding scrotum), hands, feet, nail units, ankles, nipples/areola when
    - BCC is recurrent or
    - BCC has unexpected positive margin on a recent excision or
    - BCC is primary aggressive, nodular, or superficial or
    - BCC has no identified sub-type or is sub-type adenoid, cystic, adamantoid, or fibroepithelioma of Pinkus or
    - BCC is on the face or
    - Member has a genetic syndrome imparting a predisposition to skin cancer
  - Cheeks, forehead, scalp, neck, jawline, pretibial surface when
    - BCC is recurrent or
    - BCC has unexpected positive margin on a recent excision or
    - BCC is primary aggressive or nodular or
    - BCC has no identified sub-type or is sub-type adenoid, cystic, adamantoid, or fibroepithelioma of Pinkus or
    - BCC is on the face and either
      - Tumor is larger than 1 cm or
      - BCC has aggressive histology
    - BCC is primary superficial and either
      - Member is immunocompromised or
      - Tumor is larger than .5cm
    - Member has a genetic syndrome imparting a predisposition to skin cancer
  - Trunk and extremities (excluding pretibial surfaces, hands, feet, and ankles) when
    - BCC is recurrent and aggressive or nodular
    - BCC has unexpected positive margin on a recent excision and is aggressive or nodular
    - BCC is primary aggressive and larger than .5cm
    - BCC has no identified sub-type or is sub-type adenoid, cystic, adamantoid, or fibroepithelioma of Pinkus and is larger than 2cm or
    - BCC is nodular and either
      - Member is immunocompromised or
      - Tumor is larger than 2cm or
    - Member has a genetic syndrome imparting a predisposition to skin cancer
  - Previously (non-solar) irradiated skin

- Traumatic scars
- Osteomyelitic regions
- Chronically inflamed/ulcerated regions

- Squamous cell carcinoma (SCC) in ANY of the following locations:
  - Mask areas of the face (central face, eyelids [including inner/outer canthi], eyebrows, nose, lips [cutaneous/mucosal/vermillion], chin, ear and periauricular skin/sulci, temple), genitalia (including perineal and perianal areas, excluding scrotum), hands, feet, nail units, ankles, nipples/areola when
    - SCC is recurrent or
    - SCC has an unexpected positive margin on a recent excision or
    - SCC is primary aggressive, verrucous, or KA type or
    - SCC does not have aggressive histologic features or a Clark level greater than III or
    - SCC is Bowen disease/in situ or
    - Member has a genetic syndrome imparting a predisposition to skin cancer
  - Cheeks, forehead, scalp, neck, jawline, pretibial surface when
    - SCC is recurrent or has an unexpected positive margin on a recent excision and is
      - Aggressive,
      - KA type,
      - in situ/Bowen, or
      - is less than two millimeters in depth and has a Clark level no greater than III with no aggressive histologic features or
    - SCC is primary aggressive or KA type, or
    - SCC does not have aggressive histologic features or a Clark level greater than III, or
    - SCC is primary Bowen disease/in situ, or
    - Member has a genetic syndrome imparting a predisposition to skin cancer
  - Trunk and extremities (excluding pretibial surfaces, hands, feet, and ankles) when
    - SCC is recurrent or has an unexpected positive margin on a recent excision and is
      - Aggressive,
      - KA type, or
      - is less than two millimeters in depth and has a Clark level no greater than III with no aggressive histologic features, or
    - SCC is primary aggressive, or
    - SCC is KA type and is either
      - Larger than half a centimeter in an immunocompromised member or
      - Larger than a centimeter in a member with a healthy immune system or
    - SCC does not have aggressive histologic features or a Clark level greater than III and is either
      - Larger than a centimeter in an immunocompromised member or
      - Larger than two centimeters in a member with a healthy immune system or
    - SCC is Bowen disease/in situ and is either
      - Larger than a centimeter in an immunocompromised member or
      - Larger than two centimeters in a member with a healthy immune system or
    - Member has a genetic syndrome imparting a predisposition to skin cancer
  - Previously (non-solar) irradiated skin
  - Traumatic scars
  - Osteomyelitic regions
  - Chronically inflamed/ulcerated region
- Lentigo maligna in ANY of the following locations:
  - Mask areas of the face (central face, eyelids [including inner/outer canthi], eyebrows, nose, lips [cutaneous/mucosal/vermillion], chin, ear and periauricular skin/sulci, temple), genitalia (including perineal and perianal areas, excluding scrotum), hands, feet, nail units, ankles, nipples/areola, cheeks, forehead, scalp, neck, jawline, pretibial surface
  - Trunk and extremities (excluding pretibial surfaces, hands, feet, and ankles) WHEN lentigo maligna is locally recurrent
- Melanoma in situ in ANY of the following locations:

    - Mask areas of the face (central face, eyelids [including inner/outer canthi], eyebrows, nose, lips [cutaneous/mucosal/vermillion], chin, ear and periauricular skin/sulci, temple), genitalia (including perineal and perianal areas, excluding scrotum), hands, feet, nail units, ankles, nipples/areola, cheeks, forehead, scalp, neck, jawline, pretibial surface
    - Trunk and extremities (excluding pretibial surfaces, hands, feet, and ankles) WHEN melanoma in situ is locally recurrent
- Adenocystic carcinoma
- Adnexal carcinoma
- Angiosarcoma
- Apocrine/eccrine carcinoma
- Atypical Fibroxanthoma
- Dermatofibrosarcoma protuberans
- Desmoplastic trichoepithelioma in the mask areas of the face (central face, eyelids [including inner/outer canthi], eyebrows, nose, lips [cutaneous/mucosal/vermillion], chin, ear and periauricular skin/sulci, temple), genitalia (including perineal and perianal areas, excluding scrotum), hands, feet, nail units, ankles, nipples/areola, cheeks, forehead, scalp, neck, jawline, or pretibial surface
- Extramammary Paget's Disease
- Leiomyosarcoma
- Malignant fibrous histiocytoma
- Undifferentiated pleomorphic sarcoma
- Merkel cell carcinoma in the mask areas of the face (central face, eyelids [including inner/outer canthi], eyebrows, nose, lips [cutaneous/mucosal/vermillion], chin, ear and periauricular skin/sulci, temple), genitalia (including perineal and perianal areas, excluding scrotum), hands, feet, nail units, ankles, nipples/areola, cheeks, forehead, scalp, neck, jawline, or pretibial surface
- Microcystic adnexal carcinoma
- Mucinous carcinoma
- Rare biopsy proven skin cancers (not otherwise specified)
- Sebaceous carcinoma

Exclusions: Harvard Pilgrim Health Care (HPHC) considers Mohs' micrographic surgery (MMS) as experimental/investigational for all other indications and locations. In addition, HPHC does not cover MMS for the treatment of:

- Actinic keratosis (AK) with focal SCC in situ, Bowenoid AK, or AK-type SCC in situ
- Bowenoid papulosis
- Internal cancers, such as invasive laryngeal carcinoma, intraoral, pharyngeal, sinus, and esophageal carcinomas

Supporting information

Mohs' micrographic surgery (MMS) is an iterative surgical and examination process for excising skin cancers that are complex, ill-defined, and sensitively located skin cancers while conserving maximal amounts of normal tissue. After fixing the tumor in place, the surgeon removes the known cancerous tissue with a narrow margin and immediately examines the cut surface to locate where the tumor continues through the margin into the remaining tissue and guide a subsequent excision, continuing in this manner until no cancer is evident on the cut surface. As it is a highly localized procedure, Mohs' is generally performed on an outpatient basis under local anesthesia.

Having been developed in 1938 and being general enough in principal to be compatible with advancements in technology and technique, MMS has a well-established usage profile. Skin tumors with shapes, sizes, and locations that preclude conventional extractions benefit from the piecewise approach of MMS. The American Academy of Dermatology, American College of Mohs Surgery, American Society for Dermatologic Surgery Association, and American Society for Mohs Surgery collaborated to produce guidelines on all scenarios for the use of MMS, published in 2012 and updated in 2013.

Guidelines:

Clark's level is a system of skin cancer staging, classifying melanomas by invasion extent.

Clark's level	Description
I	Melanoma confined to the epidermis (melanoma in situ)
II	Invasion into the papillary dermis
III	Invasion to the junction of the papillary and reticular dermis
IV	Invasion into the reticular dermis
V	Invasion into the subcutaneous fat.

Only physicians (DD/DO) trained in MMS techniques and pathologic identification may perform Mohs micrographic surgery.

Coding:

Codes are listed below for informational purposes only, and do not guarantee member coverage or provider reimbursement. The list may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible.

List of medically necessary ICD-10 Codes

CPT® Code	Description
17311	Mohs micrographic technique, including removal of all gross tumor, surgical excision of tissue specimens, mapping, color coding of specimens, microscopic examination of specimens by the surgeon, and histopathologic preparation including routine stain(s) (eg, hematoxylin and eosin, toluidine blue), head, neck, hands, feet, genitalia, or any location with surgery directly involving muscle, cartilage, bone, tendon, major nerves, or vessels; first stage, up to 5 tissue blocks
17312	Mohs micrographic technique, including removal of all gross tumor, surgical excision of tissue specimens, mapping, color coding of specimens, microscopic examination of specimens by the surgeon, and histopathologic preparation including routine stain(s) (eg, hematoxylin and eosin, toluidine blue), head, neck, hands, feet, genitalia, or any location with surgery directly involving muscle, cartilage, bone, tendon, major nerves, or vessels; first stage, up to 5 tissue blocks — Each additional stage after the first stage, up to 5 tissue blocks (List separately in addition to code for primary procedure)
17313	Mohs micrographic technique, including removal of all gross tumor, surgical excision of tissue specimens, mapping, color coding of specimens, microscopic examination of specimens by the surgeon, and histopathologic preparation including routine stain(s) (eg, hematoxylin and eosin, toluidine blue), of the trunk, arms, or legs; first stage, up to 5 tissue blocks
17314	Mohs micrographic technique, including removal of all gross tumor, surgical excision of tissue specimens, mapping, color coding of specimens, microscopic examination of specimens by the surgeon, and histopathologic preparation including routine stain(s) (eg, hematoxylin and eosin, toluidine blue), of the trunk, arms, or legs; first stage, up to 5 tissue blocks — Each additional stage after the first stage, up to 5 tissue blocks (List separately in addition to code for primary procedure)
17315	Mohs micrographic technique, including removal of all gross tumor, surgical excision of tissue specimens, mapping, color coding of specimens, microscopic examination of specimens by the surgeon, and histopathologic preparation including routine stain(s) (eg, hematoxylin and eosin, toluidine blue) each additional block after the first 5 tissue blocks, any stage (List separately in addition to code for primary procedure)

Billing Guidelines:

Member's medical records must document that services are medically necessary for the care provided. Harvard Pilgrim Health Care maintains the right to audit the services provided to our members, regardless of the participation status of the provider. All documentation must be available to HPHC upon request. Failure to produce the requested information may result in denial or retraction of payment.

References:

1. Ad Hoc Task Force, Connolly SM, Baker DR, et al. AAD/ACMS/ASDSA/ASMS 2012 appropriate use criteria for Mohs micrographic surgery: a report of the American Academy of Dermatology, American College of Mohs Surgery, American Society for Dermatologic Surgery Association, and the American Society for Mohs Surgery. *J Am Acad Dermatol*. 2012;67(4):531-550. doi:10.1016/j.jaad.2012.06.009
2. Etzkorn JR, Sobanko JF, Shin TM, et al. Correlation between appropriate use criteria and the frequency of subclinical spread or reconstruction with a flap or graft for melanomas treated with Mohs surgery with melanoma antigen recognized by T cells 1 (MART-1) immunostaining. *Dermatol Surg*. 2016;42(4):471-476. doi:10.1097/DSS.0000000000000693
3. Cernea SS, Gontijo G, Pimentel ER de A, et al. Indication guidelines for Mohs micrographic surgery in skin tumors. *An Bras Dermatol*. 2016;91(5):621-627. doi:10.1590/abd1806-4841.20164808
4. Chong T, Tristani-Firouzi P, Bowen GM, Hadley ML, Duffy KL. Mohs appropriate use criteria: retrospectively applied to nonmelanoma skin cancers at a single academic center. *Dermatol Surg*. 2015;41(8):889-895. doi:10.1097/DSS.0000000000000412
5. Clark WH, From L, Bernardino EA, Mihm MC. The Histogenesis and Biologic Behavior of Primary Human Malignant Melanomas of the Skin. *Cancer Res*. 1969;29(3):705-727.
6. Murray C, Sivajohanathan D, Hanna TP, et al. Patient indications for Mohs micrographic surgery: a clinical practice guideline. *Current Oncology*. 2019;26(1). doi:10.3747/co.26.4439

Summary of Changes:

Date	Change
11/21	Annual review; updated language to require ACMS certified dermatologist
3/21	New policy

Approved by Medical Policy Committee: 11/23/21
Approved by Clinical Policy Operational Committee: 12/20; 12/21
Policy Effective Date: 3/1/22
Initiated: 3/21