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Cancer Care Ontario
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Guideline 8-11

A Quality Initiative of the Program in Evidence-Based Care (PEBC), Cancer Care Ontario (CCO)

Patient Indications for Mohs Micrographic Surgery

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Report Date: January 9, 2018

An assessment conducted in December 2025 deferred the review of Guideline 8-11. This means that the document remains current until it is assessed again next year. The PEBC has a formal and standardized process to ensure the currency of each document (PEBC Assessment & Review Protocol)

Guideline 8-11 is comprised of 5 sections. You can access the summary and full report here:
https://www.cancercareontario.ca/en/guidelines-advice/types-of-cancer/52161

Section 1:	**Recommendations**
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PEBC Report Citation (Vancouver Style): Murray C, Sivajohanathan D, Hanna T, Bradshaw S, Solish N, Moran B, et al. Patient indications for Mohs micrographic surgery. Toronto (ON): Cancer Care Ontario; *2018 January 9*. Program in Evidence-Based Care Guideline No.: 8-11.

Journal Citation (Vancouver Style): Murray C, Sivajohanathan D, Hanna TP, Bradshaw S, Solish N, Moran B, Hekkenberg R, Wei AC, Petrella T. Patient indications for Mohs micrographic surgery: a clinical practice guideline. Curr Oncol. 2019 Feb;26(1):e94-e99. doi: 10.3747/co.26.4439.

Murray C, Sivajohanathan D, Hanna TP, Bradshaw S, Solish N, Moran B, Hekkenberg R, Wei AC, Petrella T. Patient Indications for Mohs Micrographic Surgery: A Systematic Review. J Cutan Med Surg. 2019 Jan/Feb;23(1):75-90. doi: 10.1177/1203475418786208.

Patient Indications for Mohs Micrographic Surgery

Recommendations

This is a quick reference guide and provides the guideline recommendations only. For key evidence associated with each recommendation, the systematic review, and the guideline development process, see the Full Report.

GUIDELINE OBJECTIVES

a. To describe evidence-based indications for Mohs micrographic surgery (MMS);
b. To assess Mohs outcomes such as cure rates and recurrence rates, as well as quality of life (QOL) and complications;
c. To assess whether volume of patients treated affects outcomes of MMS.

TARGET POPULATION

Adults with a diagnosis of skin cancer.

INTENDED USERS

Clinicians involved in the assessment and treatment of patients with skin cancer.

NOTE: Terms used throughout this guideline are as how individual trials and studies reported them. Although this guideline sought to include guidance for all types of skin cancer, comparative studies that met the inclusion criteria were mainly non-melanoma skin cancers. A few comparative studies on other types of skin cancers (i.e., atypical fibroxanthoma, dermatofibrosarcoma protuberans, sebaceous carcinoma, melanoma in situ, and invasive melanoma) were found and are also discussed.

Aside from MMS, other methods of intraoperative peripheral and deep circumferential margin analysis exist and are expected to also provide advantages in comparison to standard excision. However, this guideline focuses exclusively on MMS, WLE, and radiation and did not cover other methods of non-MMS forms of frozen section marginal control. Further, this guideline refers to radical radiotherapy and does not consider adjuvant radiotherapy in its literature review nor does it address metastatic disease.

RECOMMENDATIONS

Recommendation 1
Surgery (with postoperative or intraoperative marginal assessment), or radiation for those who are ineligible for surgery, should remain the standard of care for patients with skin cancer given the lack of high-quality, comparative evidence.
Qualifying Statements for Recommendation 1
• Eligibility for surgery depends on disease stage, surgical considerations, aesthetic outcomes, patient comorbidities, and patient preference. • There are various clinical situations where it may be considered appropriate for referral to a radiation oncologist. Based on standards of care and clinical experience, the Working Group suggests that the following clinical situations may be appropriate for referral for radical radiotherapy: 1. Where there is patient preference based on the expected cosmetic or functional outcomes of surgery or anxiety related to surgery; 2. Cases with increased risk of recurrence or extensive subclinical spread with surgery.

Further indications for patients with skin cancer that would be eligible for radiation is beyond the scope of this guideline.

- A multidisciplinary approach is also suggested for high-risk cases.
- For characteristics of patients who would be considered appropriate for referral to a Mohs surgeon, please refer to Recommendation 2.

Recommendation 2

MMS is recommended for those with histologically confirmed recurrent basal cell carcinoma (BCC) of the face, and is appropriate for primary BCCs of the face that are >1 cm, have aggressive histology, or are located on the H zone of the face (Figure 1-1).

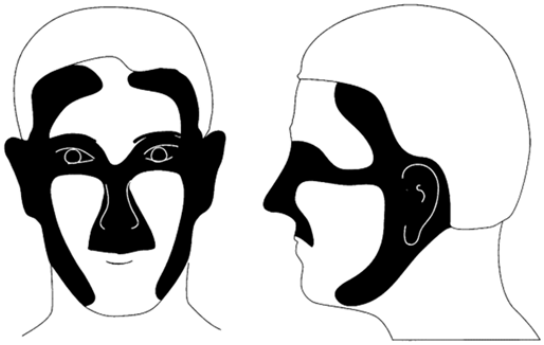

Figure 1-1. Facial H zone [1]

Qualifying Statements for Recommendation 2

- There are situations in which MMS may be considered in patients outside of the above recommendation: smaller tumours (<1 cm in diameter) where tissue sparing is of functional or cosmetic significance (this includes tumours in patients with a genetic predisposition to multiple skin cancers, such as Gorlin syndrome); complex tumours that may necessitate margin-controlled surgery; or immunosuppressed patients.
- Patients with complicated BCC or locally advanced BCC should be considered for multidisciplinary assessment by dermatologists, surgical specialists, medical, and radiation oncologists.
- Examples of aggressive histology include basosquamous, morpheaform/sclerosing, micronodular, or infiltrative, as well as lesions with perineural invasion.
- The Working Group recognizes that much of the literature used to inform recommendations is based on BCC; however, based on clinical experience and expert opinion, the Working Group suggests that there are some instances in which patients with squamous cell carcinoma (SCC) may follow the same indications for BCC. However, in cases where SCC is deemed high risk, the need for evaluation by a multidisciplinary team (i.e., dermatologists, surgical specialists, medical, and radiation oncologists) should be considered.
- Patients with aggressive or high-risk nonmelanoma skin cancer may benefit from methods, such as MMS or other intraoperative margin-controlled surgery, which lower recurrence rates. Radiation is also a valuable option in high-risk patients who may have a contraindication to surgery or who may need adjuvant therapy in high-risk disease.
- Patients with dermatofibrosarcoma protuberans, atypical fibroxanthoma, and sebaceous carcinoma have shown benefit in the use of MMS over wide local excision (WLE). The results of these studies are subject to selection bias and were not adequately powered. However, the Working Group notes that although methodologically strong evidence does not exist for rarer types of skin cancer, MMS should be considered on a case-by-case basis.

- Patients with invasive melanoma or melanoma in situ have shown no survival or recurrence benefit in the use of MMS over WLE. These retrospective studies were not adequately powered. A recent guideline by Cancer Care Ontario on primary excision margins in cutaneous melanoma has been published. Please refer to Guideline 8-2 Version 2 for recommended surgical margins in this population.

Recommendation 3
MMS should be performed by physicians who have completed a degree in medicine or equivalent, including a Royal College of Physicians and Surgeons of Canada Specialist Certificate or equivalent, and have received advanced training in MMS.
Qualifying Statements for Recommendation 3
• MMS is a surgical technique requiring specific training in the assessment of frozen section histology to detect cutaneous malignancies, the surgical skills of cancer removal, and the reconstruction of cosmetically sensitive areas of the face and other complex areas. • Advanced training is defined as having a recognized MMS fellowship through the American College of Mohs Surgery, or equivalent accrediting body.

Reference

1. Smeets NWJ, Krekels GAM, Ostertag JU, Essers BAB, Dirksen CD, Nieman FHM, et al. Surgical excision vs Mohs' micrographic surgery for basal-cell carcinoma of the face: Randomised controlled trial. Lancet. 2004;364(9447):1766-72.