FROM THE ACADEMY

Guidelines of care for the management of cutaneous squamous cell carcinoma

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Cutaneous squamous cell carcinoma (cSCC) is the second most common form of human cancer and has an increasing annual incidence. Although most cSCC is cured with office-based therapy, advanced cSCC poses a significant risk for morbidity, impact on quality of life, and death. This document provides evidence-based recommendations for the management of patients with cSCC. Topics addressed include biopsy techniques and histopathologic assessment, tumor staging, surgical and nonsurgical management, follow-up and prevention of recurrence, and management of advanced disease. The primary focus of these recommendations is on evaluation and management of primary cSCC and localized disease, but where relevant, applicability to recurrent cSCC is noted, as is general information on the management of patients with metastatic disease. (J Am Acad Dermatol https://doi.org/10.1016/j.jaad.2017.10.007.)

Key words: biopsy; curettage; metastasis; phototherapy; radiotherapy; squamous cell carcinoma; staging; surgery; surveillance; topical therapy.

DISCLAIMER

Adherence to these guidelines will not ensure successful treatment in every situation. Furthermore, these guidelines should not be interpreted as setting a standard of care, or be deemed inclusive of all proper methods of care, nor exclusive of other methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding the propriety of any specific therapy must be made by the physician and the patient in light of all the

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circumstances presented by the individual patient, and the known variability and biologic behavior of the disease. This guideline reflects the best available data at the time the guideline was prepared. The results of future studies may require revisions to the recommendations in this guideline to reflect new data.

SCOPE

This guideline addresses the management of patients with cutaneous squamous cell carcinoma (cSCC) from the perspective of a US dermatologist. Other forms of SCC, such as head and neck (ie, mucosal) SCC are outside the scope of this document, as is a discussion of cSCC in situ (Bowen disease). The primary focus of the guideline is on the most commonly considered and utilized approaches for the surgical and medical treatment of cSCC, but it also includes recommendations on appropriate biopsy techniques, staging, follow-up, and prevention of cSCC. A detailed discussion of specific chemotherapeutic or radiotherapeutic approaches for distant metastatic SCC falls outside the scope of this guideline. However, general recommendations regarding the management of patients with advanced or metastatic SCC are included to provide guidance and facilitate consultation with a physician or multidisciplinary group with specific expertise in SCC, such as a surgical, medical, or radiation oncologist, head and neck surgeon, plastic surgeon, or dermatologist specializing in SCC.

METHODS

An expert work group was convened to determine the audience and scope of the guideline, and to identify important clinical questions in the biopsy, staging, treatment, and follow-up of cSCC (Table I). Work group members completed a disclosure of interests that was updated and reviewed for potential relevant conflicts of interest periodically throughout guideline development. If a potential conflict was noted, the work group member recused himself or herself from discussion and drafting of recommendations pertinent to the topic area of the disclosed interest.

An evidence-based approach was used and available evidence was obtained by using a systematic search and review of published studies from PubMed and the Cochrane Library databases from January 1960 through April 2015 for all identified clinical questions. A secondary search was subsequently undertaken to identify and review published studies from April 2015 to August 2016 to provide the most current information. Searches were prospectively limited to publications in the English language. As cSCC is traditionally known as a form of nonmelanoma skin cancer (NMSC), a term that also includes basal cell carcinoma (BCC), searches were collectively undertaken for literature on cSCC and BCC simultaneously, by using a set of search terms applicable to both cSCC and BCC. A parallel American Academy of Dermatology (AAD) guideline on BCC has also been developed.[1] MeSH (Medical Subject Headings) terms used in various combinations in the literature search included *carcinoma*, *basal cell carcinoma*, *squamous cell carcinoma*, *skin neoplasms*, *stage(ing)*, *grade(ing)*, *score(ing)*, *biopsy*, *pathology*, *prognosis*, *signs and symptoms*, *risk factors*, *curettage*, *electrodesiccation*, *excision*, *incomplete*, *cryosurgery*, *Mohs (micrographic) surgery*, *topical*, *fluorouracil*, *imiquimod*, *laser*, *radiotherapy*, *radiation*, *photochemotherapy*, *phototherapy*, *metastasis*, *vismodegib*, *sonidegib*, *prevention*, *prevention and control*, and *recurrence*.

Table I. Clinical questions used to structure the evidence review

- What is the standard grading system for BCC and cSCC?
- What are the standard biopsy techniques for BCC and cSCC?
- What pathologic and clinical information is useful in the pathology report for BCC and cSCC?
- What are the benefits harm and effectiveness/efficacy of available treatments for BCC and cSCC?
  - Surgical treatment
    - Standard excision
    - Mohs micrographic surgery
    - Curettage and electrodesiccation
    - Cryosurgery
  - Topical therapy
    - Fluorouracil
    - Imiquimod
    - Other
  - Energy devices
    - Laser
    - Photodynamic therapy (MAL* and ALA)
    - Radiation therapy
- What are effective treatment options for the management of advanced BCC and cSCC?
  - Hedgehog inhibitors*
- What are the effective methods for follow-up and preventing recurrence and new primary keratinocyte cancer formation?
  - Oral and topical retinoids
  - Celecoxib
  - α-Difluoromethylornithine
  - Selenium
  - β-Carotene

ALA, Aminolevulinic acid; *BCC*, basal cell carcinoma; *cSCC*, cutaneous squamous cell carcinoma; *MAL*, methylaminolevulinate.
*BCC only.