

## REVIEW

# Progress in Diagnosis and Treatment of Basal Cell Carcinoma

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### ABSTRACT

Basal cell carcinoma is a common skin carcinogenesis that occurs in the epidermis and the basal layer of the skin. In general, basal cell carcinoma grows slowly, rarely metastasizes, but is locally invasive and destructive. The diagnosis is based on clinical manifestations, but the clinicopathological manifestations are different, and sometimes it is difficult to differentiate from pigmented nevus, malignant melanoma, etc. Therefore, skin biopsy is essential for the diagnosis and assessment of the risk of recurrence. There are many ways to treat basal cell carcinoma. This article reviews the diagnosis and treatment.

## 1. Introduction

Basal cell carcinoma is a common skin cancer, often occurs on sun-exposed skin, common parts such as face, neck, hand, etc. Most basal cell carcinoma grow slowly, they are locally invasive and can destroy surrounding tissues<sup>[1]</sup>. The main causes of the disease are ultraviolet radiation, prolonged exposure to arsenic-contaminated water, food and drugs, or increased risk factors for human immunodeficiency virus infection and immunosuppression<sup>[2]</sup>.

## 2. Diagnosis

The diagnosis of basal cell carcinoma depends on clinical manifestation, dermoscopy and histology. Dermoscopy will improve the diagnostic accuracy of skin lesions<sup>[3]</sup>. However, skin biopsy is essential for the diagnosis and assessment of the risk of recurrence. Histopathologically, basal cell carcinoma is usually composed of uniformly proliferating basal cell-like cells with dense nuclei, relatively few cytoplasm and unclear boundaries<sup>[4]</sup>. In histo-

pathology, nodular lesions are formed by the proliferation of large basal cells, forming huge tumor nests, surrounded by palisades, with irregular central arrangement<sup>[5]</sup>. Histopathologically, a sclerosing collagen stroma encapsulates a narrow cell chain and a small island of tumor cells. Fibroepithelial type usually occurs in the lower back, presenting as skin color or erythema soft papules or pedicle papular nodular lesions similar to fibroma or papilloma<sup>[6]</sup>.

## 3. Treatment

Surgical resection is the standard treatment for basal cell carcinoma. The study of surgical margin may realize complete resection of tumor at different anatomical locations. It is reported that the 5-year cure rate of 4-5 mm surgical margin is 9.95%<sup>[7]</sup>. Electro-drying and curettage is the removal of the surface of the tumor with a blade or a curettage device, and the burning of the remaining substrate with an electroacupuncture to control bleeding and destroy residual tumor cells. This method is simple but can not fully demonstrate that the tumor has been removed

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and is more suitable for basal cell carcinoma located in low-risk areas without invasive histopathological features<sup>[8]</sup>. cryosurgery liquid nitrogen acts directly on tumors, can form extracellular and intracellular ice crystals, destroy cell phospholipid membranes, and destroy peripheral tumor-associated blood vessels for therapeutic purposes, but can not be histologically confirmed. cryosurgery can not be used as a first-line treatment for basal cell carcinoma, especially for tumors with a high risk of recurrence. topical imiquimod cream is an immune response regulator that induces cytokine production, stimulates cellular immunity, and promotes apoptosis by bypassing anti-apoptotic mechanisms of tumor cells<sup>[9]</sup>. The curative effect is not as good as the local operation, the systemic side effect is many, usually uses in the low-risk position superficial basal cell carcinoma treatment. Local fluorouracil by inhibiting thymidine synthase interference DNA synthesis, local application of 5% FU cream has been proved to be generally effective, local fluorouracil is usually used only for superficial basal cell carcinoma in non-critical anatomical area, while for nodular or invasive basal cell carcinoma, it is generally forbidden<sup>[10]</sup>. light energy therapy, because reactive oxygen species produced by photosensitizers selectively absorb light induces cytotoxicity in tumor cells and local inflammatory responses that may lead to tumor destruction, complete tumor resection depends on the concentration of photosensitizers in tumor cells and the ability of light focusing in related regions. the effect of radiotherapy is positive, but recurrent basal cell carcinoma after radiotherapy may exhibit greater aggressiveness, including second recurrence and distant metastasis. in addition, the evidence of long-term efficacy of radiotherapy is limited. common side effects include chronic radiation dermatitis, permanent alopecia, dermal and subcutaneous fibrosis, necrosis, and secondary cutaneous malignancies. therefore, radiotherapy is generally applicable to patients not suitable for surgery, especially in high-risk areas<sup>[11]</sup>.

#### 4. Conclusion

To sum up, preclinical and pathological assessment of recurrence risk is necessary to select the best treatment strategy. According to the location of the tumor, the pathological subtype, the patient's condition, the beauty effect and the cost of treatment, different treatment methods can

be used.

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