

Cost-Conscious Treatment of Basal Cell Carcinoma

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Abstract : Introduction: Basal cell carcinoma (BCC) is the most common skin cancer worldwide and requires substantial resources to treat. When choosing between indicated therapies, providers consider their associated adverse effects, efficacy, cosmesis, and function preservation. The patient's tumor burden, infiltrative risk, and risk of tumor recurrence are also considered. Treatment cost is often left out of these discussions. This can lead to financial toxicity, which describes the harm and quality of life reductions inflicted by high care costs. Methods: We studied the guidelines set forth by the American Academy of Dermatology for the treatment of BCC. A PubMed literature search was conducted to identify the costs of each recommended therapy. We discuss costs alongside treatment efficacy and side-effect profile. Results: Surgical treatment for BCC can be cost-effective if the appropriate treatment is selected for the presenting tumor. Curettage and electrodesiccation can be used in low-grade, low-recurrence tumors in aesthetically unimportant areas. The benefits of cost-conscious care are not likely to be outweighed by the risks of poor cosmesis or tumor return (\$471 BCC of the cheek). When tumor burden is limited, MMS offers better cure rates and lower recurrence rates than surgical excision, and with comparable costs (MMS \$1263; SE \$949). Surgical excision with permanent sections may be indicated when tumor burden is more extensive or if molecular testing is necessary. The utility of surgical excision with frozen sections, which costs substantially more than MMS without comparable outcomes, is less clear (SE with frozen sections \$2334-\$3085). Less data exists on non-surgical treatments for BCC. These techniques cost less, but recurrence-risk is high. Side-effects of nonsurgical treatment are limited to local skin reactions, and cosmesis is good. Cryotherapy, 5-FU, and MAL-PDT are all more affordable than surgery, but high recurrence rates increase risk of secondary financial and psychosocial burden (recurrence rates 21-39%; cost \$100-270). Radiation therapy offers better clearance rates than other nonsurgical treatments but is associated with similar recurrence rates and a significantly larger financial burden (\$2591-\$3460 BCC of the cheek). Treatments for advanced or metastatic BCC are extremely costly, but few patients require their use, and the societal cost burden remains low. Vismodegib and sonidegib have good response rates but substantial side effects, and therapy should be combined with multidisciplinary care and palliative measures. Expert-review has found sonidegib to be the less expensive and more efficacious option (vismodegib \$128,358; sonidegib \$122,579). Platinum therapy, while not FDA-approved, is also effective but expensive (~\$91,435). Immunotherapy offers a new line of treatment in patients intolerant of hedgehog inhibitors (\$683,061). Conclusion: Dermatologists working within resource-compressed practices and with resource-limited patients must prudently manage the healthcare dollar. Surgical therapies for BCC offer the lowest risk of recurrence at the most reasonable cost. Non-surgical therapies are more affordable, but high recurrence rates increase the risk of secondary financial and psychosocial burdens. Treatments for advanced BCC are incredibly costly, but the low incidence means the overall cost to the system is low.

Keywords : nonmelanoma skin cancer, basal cell skin cancer, squamous cell skin cancer, cost of care

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