

# Small-Cell Lung Cancer Presenting with Ocular and Scalp Metastases

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## Abstract

In this article, we present an unusual first presentation of small-cell lung cancer with eye and skin metastases. This case reveals the importance of considering malignancy to explain visual symptoms or skin lesions with the appropriate oncologic risk factors. The epidemiologic, diagnostic, and treatment characteristics of these rare metastatic complications are summarized here.

## Résumé

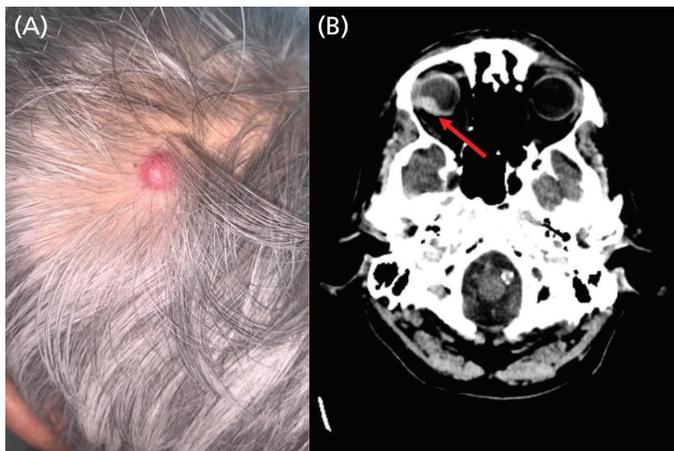
Dans ces images et l'article correspondant, nous présentons les premières manifestations inhabituelles d'un cancer du poumon à petites cellules avec métastases oculaires et cutanées. Ce cas révèle l'importance de tenir compte de la malignité pour expliquer des symptômes visuels ou des lésions cutanées par les facteurs de risque oncologiques appropriés. Nous résumons les caractéristiques épidémiologiques, diagnostiques et thérapeutiques de ces complications métastatiques rares.

*Keywords: eye, ocular, skin, metastases, lung cancer, presentation*

A 70-year-old man with a 50 pack-year smoking history presented with acute painless vision loss in his right eye. Skin examination showed numerous tender, well-defined, red–purple skin nodules between 0.5 and 2 cm in diameter on his scalp (Figure 1A) and chest wall. Computed tomography (CT) of head showed a 1.2 cm hyperdensity in the right globe suggestive of ocular metastasis (Figure 1B). Given the unusual morphology of the lesions, and to rule out a possible systemic disease, a biopsy of the chest wall skin lesion was performed. It revealed poorly differentiated malignant

cells with scant cytoplasm and inconspicuous nucleoli. Immunohistochemistry revealed positivity for pankeratin, CD56, CK7, TTF-1, chromogranin, and synaptophysin. This was consistent with small-cell lung carcinoma. Chest and abdominal imaging showed a hilar mass, pulmonary nodules, and renal, adrenal, and bony metastases. He requested comfort care and was transferred to the palliative care unit.

Cutaneous metastasis occurs in 1–12% of lung malignancy, usually adenocarcinoma, and signifies aggressive, poorly differentiated malignancy.<sup>1,2</sup> Lesions typically manifest



**Figure 1.** A 70-year-old man who presented with vision loss was found to have metastatic small-cell lung cancer. He had numerous nodular cutaneous lesions on his scalp (A) and chest wall, the largest of which measured approximately 2 cm in diameter. CT of his head showed ocular metastasis in the posterolateral aspect of the right globe (B).

as firm, round nodules that can ulcerate.<sup>1</sup> Metastatic disease should be considered with new skin lesions and the appropriate oncologic risk factors, as patients may present without symptoms of the primary tumor, as in our patient. A definitive diagnosis can be made by biopsy, which minimizes the need for invasive testing.<sup>1</sup> Skin involvement is a poor prognostic sign in lung malignancy, with average survival between 3 and 5 months.<sup>1,2</sup> Treatment involves chemotherapy, or surgical resection for isolated lesions in patients with a better prognosis.<sup>2</sup>

Ocular metastases are uncommon, and visual symptoms are usually not the initial presentation of systemic malignancy.<sup>3</sup> The choroid is most commonly affected due its arterial supply.<sup>3</sup> The most common site of primary malignancies are lung (in men) and breast (in women), and the most likely pathology is adenocarcinoma.<sup>3</sup> Ocular metastasis from small-cell lung cancer is less common and limited to case reports.<sup>3</sup> Preliminary imaging of possible lesions includes slit-lamp photography for the anterior chamber, and CT or MRI for the orbits. Important treatment modalities include local

approaches such as external beam radiation therapy, and/or systemic approaches such as chemotherapy and targeted agents.<sup>3</sup>

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## Consent

Written informed consent was obtained from the patient.

## Conflicts of Interest

The authors state that there are no conflicts of interest to disclose.

## Contributions

All authors contributed to conception, design, and drafting of the manuscript.

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