

# *Cutaneous metastases from internal cancers*

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## ABSTRACT

**Background:** Cutaneous metastases (CMs) from carcinoma are relatively uncommon, being usually late events in the course of internal malignancies. CMs from internal tumors seen at a secondary dermatological centre in Tunis are reported.

**Methods:** A retrospective review of the available clinical records and histological material of all patients with CMs from internal malignancies was performed over a 14-year period.

**Results:** Fourteen cases of CMs were recorded: 8 males and 6 females. The age range was 53 to 96 years, with a mean of 63.5 years for males and 76.5 years for females. CMs represented the first indication of an internal malignancy in 64% of cases. Firm solitary or multiple nodules were the most relevant clinical presentation (93%). Preferred sites were the thorax (50%), the abdomen (29%), and the head and neck region (21%). The common sites of primary malignancy were the lungs (38%) in males and breast (33%) in females. Four out of 14 patients died within a short follow-up period (mean 9.5 months).

**Discussion:** CMs are relatively rare in patients with internal cancers, but they may be a presenting sign of such cancers.

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## KEY WORDS

internal cancers,  
skin  
metastases,  
14-year period,  
retrospective  
study

### *Background*

With the exception of breast carcinoma, malignancies rarely spread to the skin. Skin metastases are usually late events in the course of tumor progression. These metastases may help to identify and locate an occult carcinoma. They may also constitute the first manifestation of relapse of a tumor considered to be in complete remission.

The aim of the present study was to perform an analysis of the epidemiological, clinical, histological pro-

file, and course of cutaneous metastases (CMs) from internal tumors observed at a secondary dermatological center in Tunis.

### *Methods*

A retrospective analysis of all patients with CMs from internal malignancies over the past 14 years (January



**Figure 1. Firm, violaceous nodule on the right nipple (case 9).**

1993 to December 2007) was conducted in the dermatology department of Habib Thameur Teaching Hospital in Tunis. The available clinical records and histological material of these cases were reviewed. Histological confirmation of metastases was obtained in all cases; routine hematoxylin-eosin stains were available in all instances and occasionally immunostains were performed.

## Results

Among the 65,943 new outpatients seen in our dermatology department during the 14-year study period, 14 cases of CMs were recorded corresponding to 8 males and 6 females.

Epidemiological and clinical data are summarized in Table 1.

The age range was 53 to 96 years, with a mean of 63.5 years for males and 76.5 years for females. Cutaneous metastases represented the first indication of an internal malignancy in 9 patients (cases 1 to 9), and were the sign of progression of the known primary internal tumor in 2 cases (patients 10 and 14). The average interval between diagnosis of internal malignancy and cutaneous presentation was 8.2 months (range: <1 month to 4 years). Firm, painless, cutaneous nodules were the prominent clinical signs observed in 13 patients (93%). Lesions were mostly single (71%). A crusty, firm, erythematous plaque was observed in one case on the right nipple. The cutaneous sites of metastasis included the thorax (Fig. 1), the abdomen, the head and neck (Fig. 2), and the limbs and pelvis (see Table 1). Extracutaneous sites of secondary metastases were found in 9 patients.

**Figure 2. Subcutaneous nodules on the trunk (case 11).**



The common histological type was adenocarcinoma, with the most frequent primary tumor site in males being the lung (38%), and the breast in females (33%). In one case, the primary malignancy remained unknown despite several investigations.

The treatment was surgical excision in all patients with a sole lesion, combined with radiotherapy and chemotherapy. Palliative care was indicated in 4 cases with disseminated neoplasms.

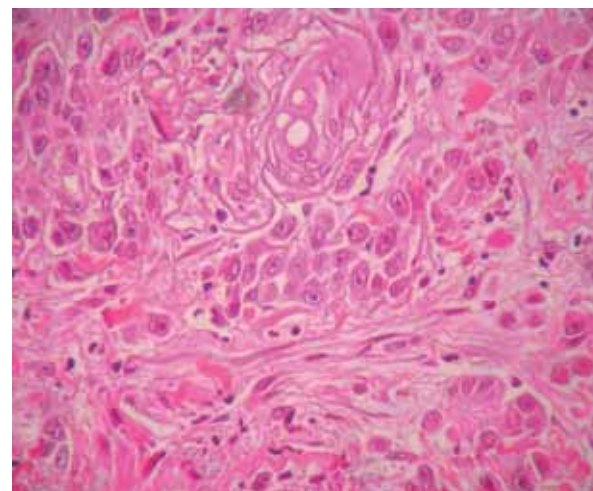
The mean survival rate from the diagnosis of metastases was 19 months (6 months to 5 years); a clinical and histological remission following systemic treatment was obtained in 5 cases; dissemination occurred in 3 cases, and death in four cases.

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## Discussion

The incidence of CMs from internal malignancies is quite low, varying from 4.5 to 9% (1–3). In a recent meta-analysis it was estimated at 5.3% (4). Of the patients observed in our dermatology department, we



**Figure 3. Moderately differentiated adenocarcinoma (case 4).**

**Table 1.** Epidemiological and clinical data of patients with skin metastases from internal cancers.

Patients	Primary malignancy	Histological type	Cancer site	Other affected sites	Course/Follow-up
1	Stomach cancer	Mucinous adenocarcinoma	Anus	Inguinal and abdominal lymph nodes, liver	Cancer extension/6 months
2	Lung cancer	Differentiated epidermoid carcinoma	Sacrum	–	Death/8 months
3	Ovary cancer	Papillary Adenocarcinoma	Umbilicus	Axillary, pelvic and abdominal lymph nodes, pancreas	Lost to follow-up
4	Colon cancer	Mucosecretant adenocarcinoma	Umbilicus	Liver	Death/6 months
5	Unknown primary origin	Mature cordonal adenocarcinoma	Lower lip	–	Lost to follow-up
6	Lung cancer	Small cell carcinoma	Thorax, abdomen	–	Remission/1 year
7	Breast cancer	Mammary adenocarcinoma	Left breast	–	Remission/5 years
8	Breast cancer	Mammary adenocarcinoma	Left breast	Bones + axillary and abdominal nodes	Remission/3 years
9	Breast cancer	Canalar adenocarcinoma	Right nipple	–	Remission/1 year
10	Lung cancer	Well differentiated epidermoid carcinoma	Thorax	Axillary lymph nodes	Remission/2 years
11	Stomach cancer	Gastric adenocarcinoma	Neck, Thorax, Abdomen	Liver	Death/1 year
12	Hepatic cancer	Undifferentiated carcinoma	Third finger	Lungs	Death/1 year
13	Lung cancer	Tubular adenocarcinoma	Right arm	Liver, adrenal glands	Cancer extension/9 months
14	Larynx cancer	Epidermoid carcinoma	Face, thorax	Supraclavicular and mediastinal lymph nodes	Relapse of CMs and lymph node metastases/3 years

estimate an incidence at 0.02% corresponding to one case in 4,000 to 5,000.

CMs usually appear as late events in the course of a known neoplastic disease, but they may be the presenting sign of an unknown tumor, or the first manifestation of recurrence of a tumor considered to be in complete remission (5).

In fact, skin involvement as the first sign of cancer is rare; and is reported in approximately 1% of patients with internal neoplasms, and mostly with cancers of the lung, kidney, and ovary (6). In our study 9/14 patients with CMs revealed internal neoplasms (9). The average duration of cutaneous lesions before diagnosis is longer in patients with CMs revealing an internal neoplasm.

Most CMs occur in a body region near the primary tumor. The most common sites were the neck, the head, and the trunk (5, 7). The thorax was the site of CMs in half of our cases, which may be explained by the predominance of lung and breast cancers in this series. Clinical presentations include erythematous crusted plaques, neoplastic alopecia, carcinoma erysipelatoides, erythema annulare-like, herpetiform or zosteriform, target-like, and pyodermatic and morphea-like lesions (7–9).

Cytology or histopathology are obligatory, because any histological type may be encountered with a predominance of adenocarcinomas. Generally, the histological types of the metastases are usually similar to the primary tumor, but may also be anaplastic. In such a situation, immunohistochemical markers and ultrastructural examination may be helpful (7, 10).

High-resolution and color Doppler sonography can be helpful in the evaluation of skin metastasis (11). Currently, serologic tests for immune complexes are being developed for certain types of cancer to help identify patients at high risk for metastasis (12).

The common primary malignancies are lung and colon cancer in males, and breast cancer in females (12–14). It is estimated that the primary remains unknown in 4.4% of patients (10).

In our series, 4/14 patients died within 6 months to 1 year after diagnosis of the primary tumor.

We conclude that a high percentage of CMs are the first sign of an unknown primary. The poor prognosis among our patients may be related to delayed consultation and/or diagnosis. This stresses the importance of early recognition of CMs in order to obtain an accurate and prompt diagnosis and timely treatment.

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**A U T H O R S '  
A D D R E S S E S**

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