

CASE REPORT

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# Cutaneous metastatic lesion as a presentation of rectal cancer: A case report

Catarina Muller, Catarina Rodrigues, Manuel Gouveia, Vítor Encarnação, Maria Olim Sousa, Miguel Reis

## ABSTRACT

**Introduction:** Colorectal cancer is ranked third among the most commonly diagnosed malignancies and second among the leading causes of cancer death in the world. However, only a few case reports are found in the literature regarding skin metastases originating from rectal cancer, which usually shows widespread disease and poor prognosis.

**Case Report:** A 68-year-old female patient presented with anterior chest wall pain and swelling and a history of progressive growing of the lesion for the last five months. Physical examination revealed a palpable 3 cm mass in the intermammary area with mild inflammation of the surrounding skin. The lesion biopsy revealed moderately differentiated intestinal-type adenocarcinoma, suggesting metastasis of a colorectal primary cancer. Colonoscopy revealed an obstructive neoplasm of the rectum located 12 cm from the anal verge. Histology revealed a moderately differentiated adenocarcinoma as seen before in the skin lesion. The computed tomography (CT) scan also detected several secondary lesions on the liver.

**Conclusion:** Approximately 0.8% of the patients present with a skin lesion as the first indication of a silent internal malignancy, which is rare and carries a poor prognosis. Cutaneous metastases are considered as an advanced presentation of colorectal cancer, mostly managed with palliative care.

**Keywords:** Colorectal cancer, Cutaneous metastases, Skin lesion

### How to cite this article

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## INTRODUCTION

Colorectal cancer (CRC) is a globally important public health issue. According to data published by World Health Organization, the CRC is ranked third among the most commonly diagnosed malignancies and second among the leading causes of cancer death in the world. More than 10% of cases are already metastatic tumors by the time they are diagnosed. The sites most often affected by the advanced disease are the liver, lungs, and central nervous system [1]. It is extremely rare to encounter cutaneous metastases from colorectal cancer. Presence of cutaneous metastases indicates poor prognosis and widespread of disease [2, 3].

The authors present a clinical case of a skin lesion as a presentation of rectal cancer.

## CASE REPORT

The authors present a case of a 68-year-old female with a personal history of appendectomy for acute appendicitis, with no relevant comorbidities, medication, or family background of oncological diseases.

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The patient was admitted to the emergency department with anterior chest wall pain and swelling and a history of progressive growing of the lesion for the last five months. Physical examination revealed a palpable 3 cm mass in the intermammary area with mild inflammation of the surrounding skin. The patient was discharged with a prescription of oral antibiotics and a diagnosis of an infected sebaceous cyst. A week later she was reassessed and significant growth of the mass was detected (5 cm) at the physical exam with inflammatory signs, starting suspicious ulceration as well as hemato-purulent discharge (Figure 1). The patient was then admitted to the General Surgery department for intravenous therapy and additional diagnostic exams.

Within a week the lesion grew ulcerated (Figure 2). Skin biopsy revealed moderately differentiated intestinal-type adenocarcinoma and immunohistochemistry markers revealed positive for CK20 and negative for CK7, suggesting metastases of a colorectal primary cancer. During her hospital stay, she developed rectal bleeding episodes associated with constipation that reaffirmed a need for an endoscopy study. Colonoscopy showed an obstructive neoplasm of the rectum located 12 cm from the anal verge (Figure 3). Histology revealed a moderately differentiated adenocarcinoma as seen before in the skin lesion, with the presence of the P.GLY13ASP (C.38G>A) mutation in the KRAS gene. The cancer staging was completed with a thoracic, abdominal, and pelvic CT scan, which described the rectal mass as a concentric thickening of the rectum with 12 cm of extension involving the sigmoid transition. The intermammary metastasis was referred as a solid nodular lesion of the pre-sternal soft tissue, with approximately 49 × 48 mm and with contrast enhancement (Figure 4). The CT scan also detected several secondary lesions on the liver, with



Figure 2: Skin lesion, one week after the image in Figure 1, demonstrating ulceration progression.

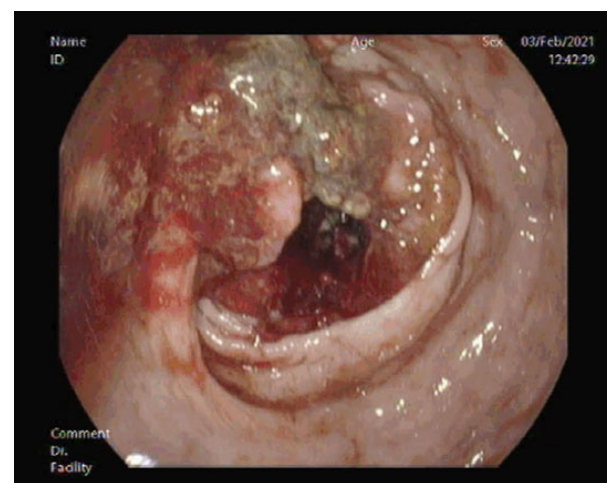


Figure 3: Colonoscopy evidencing obstructive neoplasm of the rectum. Bowel preparation was not optimal due to obstructive nature of the neoplasm.



Figure 1: Image of skin lesion in the intermammary taken on the second visit, now showing an area with mild inflammation of the surrounding skin, and starting suspicious ulceration process.

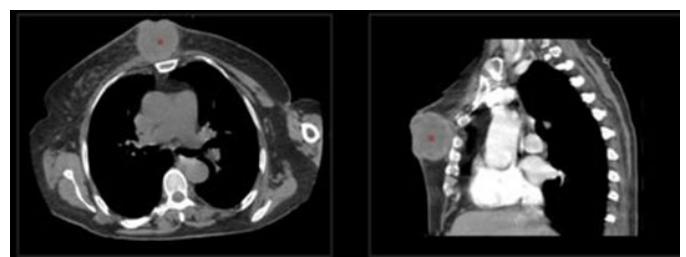


Figure 4: CT scan showing intermammary metastases.

special emphasis on the ones in the transition of the II/III segment (45 mm), segment VI (67 mm), and segment VII (22 mm).

A derivative colostomy was proposed in multidisciplinary team discussion, along with palliative hemostatic radiotherapy to the rectum and skin metastasis in addition to systemic chemotherapy. The palliative treatment improved rectorrhagia, with stable hemoglobin values (11 g/dL) and no further need of blood transfusions.

The cutaneous tumor remained dimensionally stable. Pain was controlled with medication.

## DISCUSSION

Cutaneous metastases of cancer are rare, occurring in about 1.3% of cases at the time of presentation of the primary tumor [2]. The reported case shows a rather uncommon presentation with cutaneous metastasis being the very first manifestation of inaugural internal cancer. The high incidence of CRC makes it an accountable source of metastases to the skin. Nonetheless, patients with this clinical finding represent only 4% of all patients diagnosed with CRC, making it a rare diagnostic [4].

In these cases, cutaneous metastases can assume a plethora of morphologic characteristics. Although nodules and cutaneous tumors are the most recurrent forms, inflammatory tissue responses such as cellulitis can be present—both patterns were observed in our patient [4, 5]. Several other forms of presentation are described in literature such as ulcers, blisters, alopecia plaques, and lesions that resemble herpes-zoster, epidermal cysts, neurofibromas, lymphomas, annular erythema, condylomas, and elephantiasis nostras verrucosa, among others [4–6].

The most common presentation of rectal carcinoma's skin metastases is as small subcutaneous or intradermal nodules measuring 1–2 cm in diameter. Even though there aren't any distinctive feature regarding these, they tend to coalesce. These lesions are usual asymptomatic, firm, rubbery, and painless [7, 8].

Distance to the primary tumor plays a major role in influencing sites in which cutaneous metastases appear. The closer the skin is to the primary tumor, higher is the chance of metastases. Thus, making the abdominal wall the most affected site in the case of CRC. Either direct extension of the primary tumor, hematogenic or lymphatic dissemination can influence this process [3–5]. This also explains why locations such as the pelvis, torso, thorax, upper extremities, head, neck, and upper lip are rarely affected sites by cutaneous metastases [9, 10].

Histopathology helps in establishing the correct diagnosis. Microscopical findings show similar features in both the primary tumor and the metastatic lesions. The most common type of large bowel tumors with cutaneous metastases is well differentiated mucin-secreting adenocarcinomas [3]. The immunohistochemical study is of the outmost importance in histopathological studies. The pattern of CK7-negative/CK20-positive pattern is presented in more than 70% cutaneous metastases from CRC [5].

Pathology findings in the present report showed a cutaneous metastases of an intestinal pattern moderately differentiated adenocarcinoma—immunohistochemical profile: CK7– and CK20+.

The treatment of cutaneous metastases is immediately palliative, with surgical resection reserved for solitary lesions [1, 5]. Radiotherapy and chemotherapy can be used for the palliation of local symptoms.

Once diagnosed, the cutaneous metastasis typically represents widespread disease and a reserved prognosis: more than two-thirds of patients will die within the first six months [5]. Nevertheless, there are quite a few described cases which present themselves with isolated rectal metastases to the skin without any other signs of spread disease [11, 12].

## CONCLUSION

It is uncommon to find cutaneous metastases as a presentation of a rectal carcinoma. These lesions are often accompanied by visceral metastases at presentation, reflecting advanced disease, and mostly managed with palliative care.

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Catarina Rodrigues – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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## Consent Statement

Written informed consent was obtained from the patient for publication of this article.

## Conflict of Interest

Authors declare no conflict of interest.

## Data Availability

All relevant data are within the paper and its Supporting Information files.

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