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## Atypical localization of colorectal cancer metastasis one case and literature review

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## ABSTRACT

**INTRODUCTION:** colorectal cancer is a public health challenge in France. Cutaneous metastases are rare but they give evidence of poor prognosis.

**PRESENTATION OF CASE:** 88 years old female patient, with a previous history of hysterectomy, venous thrombosis outcomes of ankle fracture and stable multiple sclerosis without treatment. She came to emergency with peritonitis. CT scan showed a pneumoperitoneum, and a transverse colonic mass. A laparotomy was performed. This revealed a perforation of caecum, and an obstructive tumor of transverse colon. An extended right semi-colectomy was performed to remove both the perforate caecum and the tumor. The patient was discharged on the 7th post-operative day. Examination confirm an adenocarcinoma pT3N0Mx. At follow up, a nodule was found on her forehead. The biopsy showed a metastasis of colon adenocarcinoma. A surgical resection was performed. To date the patient is well with no evidence of recurrent disease.

**CONCLUSION:** Cutaneous metastases are rare and there are no recommendations for their treatment. Surgical resection is the best choice, but radiotherapy may be an alternative.

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## 1. Introduction

This work has been reported in line with the scare criteria [33].

In France, colorectal cancer is the most frequent digestive cancer in 2019 [1]. 40%–60% of them are metastatic and are more frequently localized in viscera and rarely in inguinal ganglia. Among those metastasis, cutaneous one are uncommon and can be initial manifestation of tumor [2]. Their dermic localization as well as their macroscopic appearance can be several and various [3,4]. Abdominal one are the most frequent [5]. For the time being, there is no recommendation about treatment of those cutaneous metastasis. Despite useful chemotherapy or targeted therapy, only surgical resection or destruction of lesions can guarantee the cure.

We report a metachronous metastasis colon cancer: case of forehead with a literature review.

## 2. Presentation of case

This is an 88 year-old-woman patient, with history of hysterectomy, right sural venous thrombosis, stable thyroid nodule and stable multiple sclerosis. She consulted the first time at surgical emergency for abdominal pain evolving since 5 days. The physical

examination found a fever, and general abdominal tenderness. The biology found an inflammatory syndrome.

The abdominal computerized tomography (CT) scan showed a pneumoperitoneum and an occlusion on stenosis transverse mass.

The exploratory laparotomy showed right colon distension with perforation of the caecum. A tumoral mass depending to right part of transverse colon without macroscopically metastasis. Right hemi-colectomy and ileo-transverse anastomosis were performed. The post-operatives outcomes were uneventful.

Histological exam of resection showed an adenocarcinoma with two components: one part was low grade Lieberkuhn adenocarcinoma and other one was mucinous. The resection margins were correct. The tumor was classed pT3N0Mx.

The dialog and follow-up meeting conclude to a colon tumor stage II without chemotherapy or radiotherapy supplementary. Patient refuse to do a coloscopy after surgery. The carcino-embryonic antigen (ACE) and Cancer Antigen 19–9 (Ca 19–9) was normal. Until 11 months follow-up, outcomes was normal with clinical and radiological exams.

Patient consulted for forehead lesion evolving since some days (Pic. 1). Biopsy was performed conclude to secondary localization of her colon adenocarcinoma. The abdominal and cerebral CT scan was normal without visceral or intra-cerebral metastasis. They showed cutaneous forehead lesion with 16,6 mm of diameter without bone reached. Surgical resection was performed with 2 cm of margin and advancement plasty allowed cutaneous suture (Pic. 2). Histological exam confirm a mucoïd adenocarcinoma metasta-

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Picture 1. Pseudo-cystic cutaneous lesion.



Picture 2. View after resection and plasty.

sis coming from the colon lesion. The immunohistochemistry showed CDX2 and cytokeratin markers.

The final diagnostic of our patient revealed a colon adenocarcinoma pT3N0M1 (stage 4) with cutaneous metastasis and KRAS mutation. After a 12 months-follow-up, neither complications nor cancer recurrence were noted.

3. Discussion Table 1

After prostate and breast cancer, colorectal one is the 3rd cancer type of cancer in France [6]. Nevertheless, a declining prevalence is noted in these last years [7]. Nine out of ten cases

patients can be cured when early diagnosed, [8]. Metastasis represented 40%–60% of colorectal cancer and 25 % of metastasis are synchronous [9]. Cutaneous metastasis are really uncommon. Christina and Lookingbill worked on that and found respectively that only 4,2 % and 10 % were colorectal [3,10]. Those metastasis appeared in the first two years and are most of the time metachronous [3].

Their localization on the skin is various. Abdominal localization is the most frequent one [4,5,9]. On abdominal wall, they are preferentially localized on laparotomy incision or stomy orifice cicatrix [3]. Our literature review found that another skin localization can be genital organs, gingival area, perinea, conjunctiva... [2,4,11–13]. Cutaneous metastasis on head and scalp are uncommon and represented 6,9% [11].

Macroscopic presentation of metastasis is various too. The most frequent is single or multiple red nodule [3]. But it could be an ulceration, bullet lesion, alopecia patch, erythema, herpes-zona lesion, neurofibroma, condyloma, lymphoma... [3,5,14].

Because of the variety of clinical presentation, histological exam is fundamental to confirm metastasis. When metastasis is the first manifestation of the tumor, histological result can help in primitive tumor research [15]. We completed by an immunohistochemically exam with tumor markers CK7, CK19, CK20 and CDX2. Saeed showed that association of positive CK20 and negative CK7 appeared in 70 % of case [16]. As well, Werling showed that in colorectal cancer, CDX2 is generally present [17]. An association of positive CK20/negative CK7 as well as CDX2 markers were found in our patient.

We don't have recommendations about treatment of cutaneous metastasis. In case of curative treatment, authors agreed

Table 1  
Clinical case of cutaneous metastasis colorectal cancer.

Number	Authors/years	Localization of cutaneous metastasis	interval	Treatment of the metastasis
1	Atsushi et al./2011 [23]	scalp	27 month	Death before treatment
2	Hashimi et al./2013 [14]	Abdominal wall	4 years	Resection
3	Joo Young Ha et al./2016 [13]	scalp	6 month	Chemotherapy
4	Dan Yang Wang et al./2017 [4]	back	1 month	Death before treatment
5	Sarita Shah et al./2017 [15]	scalp	Synchronous	Resection
6	Yasmin Kemal et al./2018 [18]	forhead	5 years	Radiochemotherapy
7	Zilvinas Saladzinskas et al. / 2010 [24]	lip	3years 6 months	Resection
8	Jorge Ocampo-Candiani et al./2015 [25]	Right leg	4years	Chemotherapy
9	Amarjothi et al./2018 [26]	back/thoracic wall	2 months	Chemotherapy
10	Kushwaha et al./2013 [27]	Thoracic wall/neck	Synchronous	Chemotherapy
11	Georgios P. Fragulidis et al./2015 [28]	Scalp	Synchronous	Chemotherapy
12	Alotaibi et al./2018 [29]	Back, scalp and head	9 months	Chemotherapy
13	Irappa Madabhavi et al./ 2018 [30]	Thoracic wall	Synchronous	Chemotherapy
14	Abraham et al./2018 [31]	Scalp	Synchronous	Resection
15	Udkoff et al./2016 [32]	Testicle	2 years	Chemotherapy

with the proposal of R0 resection (single nodule) [16,18,19]. The margins of the resection are 1 cm [4]. The cutaneous plasty can be difficult or impossible after resection of expanse lesions. In this case chemotherapy or radiotherapy can be an alternative [20]. Kemal describes a case of healing after chemotherapy and radiotherapy [18]. Other palliative treatments are describe like cryotherapy, injection of alpha interferon, laser destruction of lesion or Imiquinod gel [20,21]. These treatment can be used for pain or aesthetic indications [18].

According to some authors, cutaneous metastasis are signals of bad prognosis [4,11,15]. Saeed researches conclude that two-thirds of patients died in about 6 months [16]. Schoenlab found a survival delay of 4,4 months after cutaneous metastasis diagnose [22]. After 5 months follow-up, no recurrence is found in our patient.

#### 4. Conclusion

Although the incidence is lightly decreasing in last years, colorectal cancer still a public health challenge in France. Cutaneous metastasis are rare and witness of a poor pathology prognostic. Surgical resection with correct margins is the best healing treatment, even if physical destruction of lesions is an alternative.

We have patient consenting to this report being published.

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No conflicts of interest.

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#### Ethical approval

My publication is exempted from ethical approval of my institution.

#### Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

#### Author contribution

Dr CAGNIET Audrey contributed to writing and correction.  
Dr Frederica Ritz contributed to translate in English.

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