

# Not All Gastric Ulcers are Peptic Ulcer Disease: Unusual Case of Gastric Metastases

by Abdul Haseeb, Erinn Downs-Kelly, Kathryn Peterson, Iliana Doycheva

**Metastases to the stomach from non-gastric neoplasms have been identified in 2 to 5% of patients at autopsy. We present a rare case of gastric metastases from dedifferentiated chondrosarcoma. No particular characteristic appearance on endoscopy defines metastatic disease, making histology compulsory for accurate diagnosis and appropriate management. Although rare, gastric metastases should always be considered in patients with a known history of malignancy.**

## INTRODUCTION

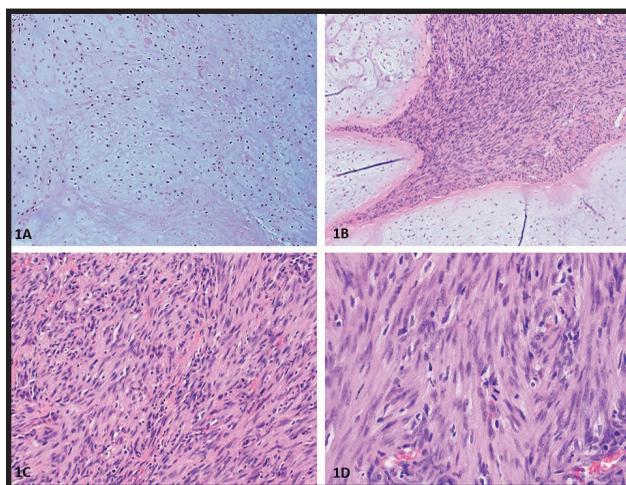
The stomach is a rare site for metastases of common malignancies.<sup>1</sup> However, an increasing number of reported metastatic lesions in the stomach have been noted due to improved tools for diagnosis and treatment of cancer patients. The most frequently reported primary sites of tumor metastasizing to the stomach are melanoma, lung and breast (especially those with a lobular phenotype).<sup>1</sup> Herein we report a case of gastric metastases from a dedifferentiated chondrosarcoma in a gentleman who presented with melena and worsening anemia. This unusual clinical scenario underscores the importance of obtaining a pertinent clinical history and endoscopic biopsies to diagnose gastric metastases.

## CASE PRESENTATION

The patient is a 68-year-old male with a past medical history of type 2 diabetes mellitus, hypertension, hyperlipidemia and prostate cancer status post

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**Figure 1 A-D.** Femur resection showing the varying histologic features of dedifferentiated chondrosarcoma.

prostatectomy. A rapidly growing and painful right thigh mass brought him to clinical attention in November 2011. The mass was finally diagnosed as a dedifferentiated chondrosarcoma. The patient underwent a radical resection of the 5.7 cm right distal femoral mass in December 2011; he was staged at that time as pT1 pN0 with negative margins. A metastatic work-up prior to resection was negative. Histologically, the resected tumor was composed of an admixture of conventional low-grade chondrosarcoma with areas of

dedifferentiation (Figure 1). Nearly two years later, the patient developed metastatic disease to the lung, bone and paraspinal muscles. In July 2013 he was initiated on pazopanib, a tyrosine kinase inhibitor that carried the potential side effects of mucosal surface ulceration and slowed healing of intestinal ulcerations.<sup>2</sup> Six months later, the patient presented to the emergency department with new onset melena, fatigue and shortness of breath. His laboratory findings were significant for hemoglobin of 7.7 mg/dl from a prior normal value three months earlier. The patient had no history of nonsteroidal anti-inflammatory drug (NSAID) use, reflux disease or peptic ulcer disease. Esophagogastroduodenoscopy (EGD) revealed seven large, non-bleeding, cratered ulcers with heaped edges in the body of the stomach (Figure 2). Biopsy of these ulcers demonstrated an atypical spindle cell proliferation (Figure 3). Based on the histomorphology alone, the differential diagnosis would include a gastrointestinal stromal tumor, smooth muscle neoplasm and schwannoma or reactive granulation tissue. Given the patient's history, the chondrosarcoma resection material was reviewed and compared to the gastric spindle cell proliferation and a diagnosis of metastatic dedifferentiated chondrosarcoma was rendered. Restaging scans showed progressive bone disease and the patient chose to be transferred to palliative care.

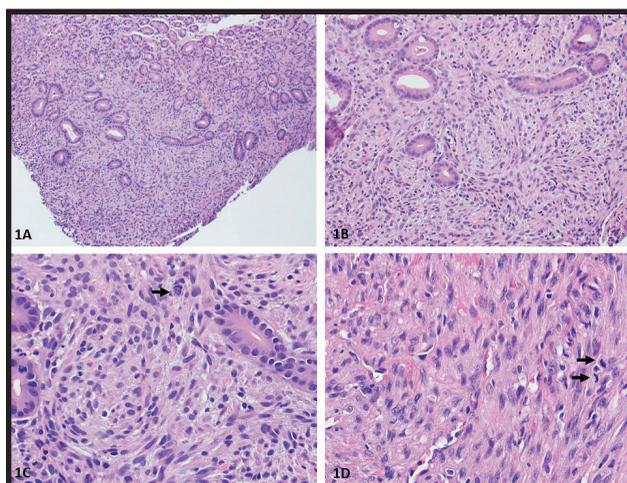
## DISCUSSION

Dedifferentiated chondrosarcoma is a rare and highly aggressive variant, histologically typified by areas of low-grade chondrosarcoma with abrupt transitions to areas of high-grade non-cartilaginous sarcoma. The prognosis is poor with overall five year survival rates ranging from 7% to 24%.<sup>3-6</sup> Like most sarcomas, the lung is the most common site for metastases. Metastatic lesions to the stomach have been rarely described.<sup>7</sup>

Metastases to the gastrointestinal tract are more commonly seen in the upper tract than in the lower.<sup>8</sup> Metastases to the stomach from non-gastric neoplasms have been identified in 2 to 5% of patients at autopsy based on different studies.<sup>9,10</sup> The common presentations of gastric metastases include anemia, bleeding, dyspepsia, or epigastric pain.<sup>1</sup> Gastric involvement may be characterized as single or multiple lesions,



**Figure 2.** Endoscopic view of multiple clean based ulcers with heaped edges in the body of stomach representing gastric metastasis from dedifferentiated chondrosarcoma.



**Figure 3.** Gastric ulcer biopsy showing involvement by an atypical spindle cell population. 1A and 1 B. Low and medium power images respectively showing a small focus of a spindle cell population within the lamina propria causing distortion of the non-dysplastic glandular epithelium. 1C. High power image of the spindle cell population within the gastric lamina propria wherein the spindle cells have hyperchromatic nuclei with irregular nuclear contours; a mitotic figure is denoted with the arrow. 1D. High power image of the primary dedifferentiated chondrosarcoma for histologic comparison; the spindle cell populations within the gastric biopsy and those of the dedifferentiated chondrosarcoma are histomorphologically similar; mitotic figures are denoted with arrows.

## A CASE REPORT

with single lesions being more common.<sup>1,7,10</sup> Solitary lesions are mainly located in the upper or middle one-third of the stomach and have a predilection to involve the greater curvature. Different endoscopic patterns include nodules, bulls-eye, extrinsic mass lesions, polypoid tumor or volcano-like lesions.<sup>1,8</sup> No particular characteristic appearance defines metastatic disease, making histology compulsory for diagnosis. For the pathologist, knowledge of the clinical history is key and may allow for a diagnosis to be rendered on routinely stained slides with comparison to the primary, avoiding a costly immunohistochemical work up. In this particular case, given the paucity of immunohistochemical stains that could confirm the diagnosis, correlation with previous histology along with clinical and endoscopic findings were essential in arriving at the diagnosis.

## CONCLUSION

Although rare, gastric metastases should always be considered in patients with a known history of malignancy. Endoscopic evaluation along with biopsies of suspicious lesions, help us differentiate metastases from other etiologies including infection or chemotherapy related mucosal lesions. ■

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