

## CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

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### Histopathology Quiz – Case 3

An asymptomatic elderly patient presented with an incidental image of gastric mass during a routine evaluation. She denied personal or familial antecedent of malignancy. The laboratory tests, including tumor markers, were normal. The gastric endoscopic findings were unremarkable. Histopathological and immunohistochemical findings of gastric samples obtained by laparoscopy are shown in figure 1. The immunohistochemistry study revealed the absence of desmin, as well as alpha-smooth muscle actin expressions. Postoperative evolution was uneventful and the hospital discharge occurred in a short time.

#### Comment

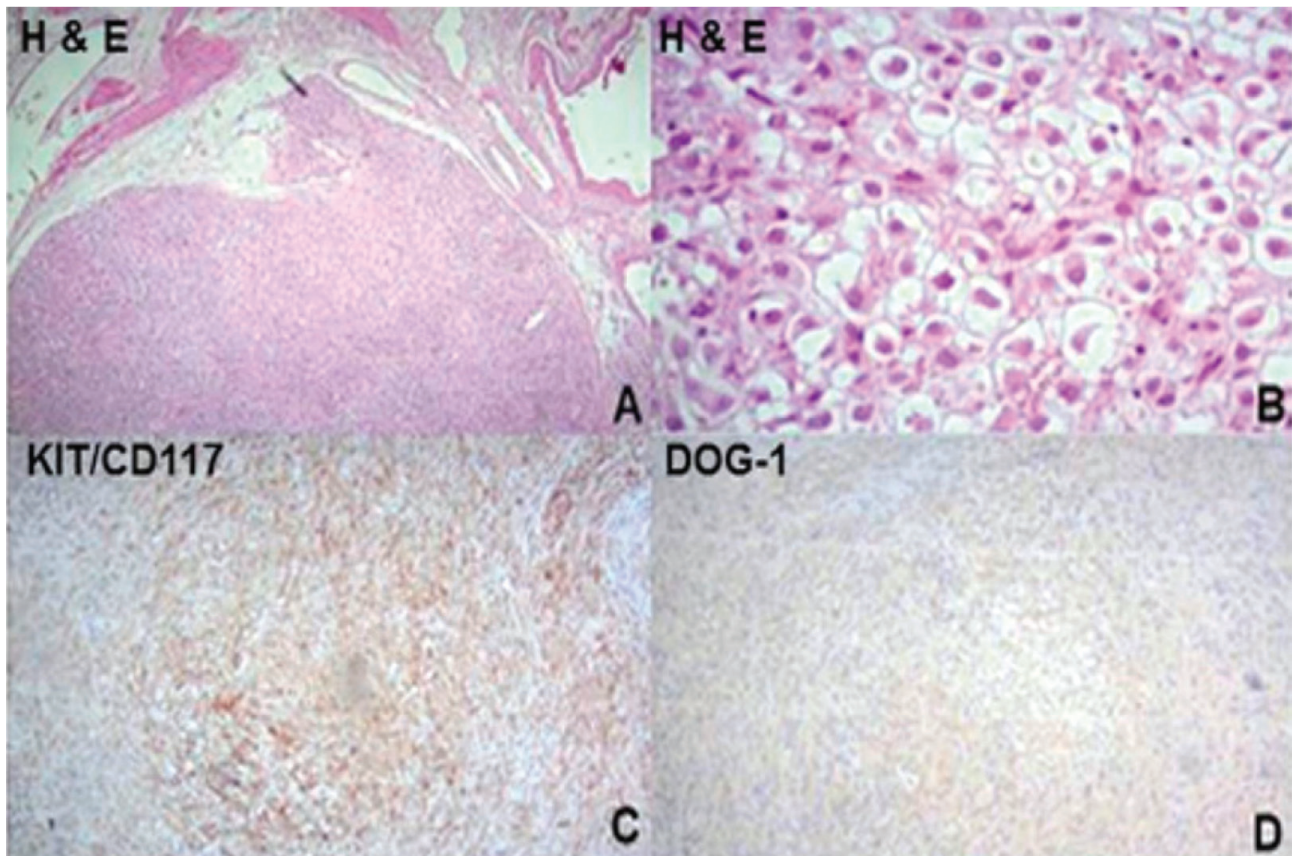
*The presence of atypical medium-sized round and oval cells with*

*granular cytoplasm and vacuolization characterized the epithelioid pattern of the tumor, presenting five mitotic figures per 50 high power fields. Gastrointestinal stromal tumors (GISTs) are the main mesenchymal neoplasms (near 80%) of the GI tract and the esti-*

ARCHIVES OF HELLENIC MEDICINE 2021, 38(4):575–576  
ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2021, 38(4):575–576

N.A. Silva,<sup>1</sup>  
M.D.G. Gonçalves,<sup>1</sup>  
V.M. dos Santos<sup>2</sup>

<sup>1</sup>Department of General Surgery, State Worker's Hospital, São Paulo-SP  
<sup>2</sup>Department of Medicine, Armed Forces Hospital and Catholic University, Brasília-DF, Brazil



**Figure 1.** (A) Nodular area in the gastric muscular layer (H&E, ×4). (B) Round and ovoid cells with abundant eosinophilic cytoplasm and nuclear pleomorphism (H&E, ×40). (C, D) Positive immunostaining (10×) revealing diffuse CD117 and weak DOG-1.

mated incidence in the Netherlands is approximately 16 per million people.<sup>1-5</sup> The most frequently affected sites include the stomach (60–70%) and the small intestine (15–30%), followed by the large bowel, esophagus, rectum, mesentery and omentum. They are more commonly described in males and middle-aged and elderly people, most of the patients are symptomatic, and manifestations are often related to the tumor size.<sup>4</sup> GISTs are morphologically classified on the spindle (the most common), epithelioid, and mixed patterns. They typically (near to 80%) express CD 34 and KIT (CD117) the protein product of *c-kit* proto-oncogene, which constitutes an authentication mark for the diagnosis; and DOG1, Ki-67, and succinate dehydrogenase B (SDHB) are additional resources utilized.<sup>1-3</sup> CD117 DOG1 and CD34 are found expressed in 95.0%, 93.4% and 81.1% of GISTs, respectively.<sup>1-3</sup> Therefore, the combined detection of CD117, DOG1, and CD34 is highly consistent with the diagnosis of GISTs.<sup>1-3</sup> GISTs may develop in concomitance with diverse neoplasms, including lymphoma and schwannoma.<sup>2</sup> The first treatment option is a surgical resection that can be followed by the administration of imatinib.<sup>2-5</sup> The outcome is usually favorable and the 5-year survival rate after surgery is 65%; factors playing a role in prognosis include ageing, tumor site and size, mitotic index, total resection and postoperative imatinib.<sup>4</sup> Laparoscopy is the preferred approach for gastric GISTs, with efficacy comparable to the open surgery, but the indication for a laparoscopic procedure depends on the location, shape and size of the tumors. There is shorter operative time, reduced blood loss, earlier time to oral intake, and quicker discharge.<sup>4</sup> Concordant with the current literature, the laparoscopic management of this gastric GIST yielded a good outcome. In conclusion, GISTs are the most frequent mesenchymal neoplasms of the GI tract; the exophytic site is very uncommon; ultrasound, computed tomography, and magnetic resonance imaging can raise the suspicion; laparoscopy is

the option for confirming the diagnosis and treatment; the diagnosis is based on the positivity of CD 34 and KIT (CD117).

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Corresponding author:

V.M. dos Santos, Armed Forces Hospital, Estrada do Contorno do Bosque s/n, Cruzeiro Novo, CEP 70.658-900, Brasília-DF, Brazil  
e-mail: vitorinomodesto@gmail.com