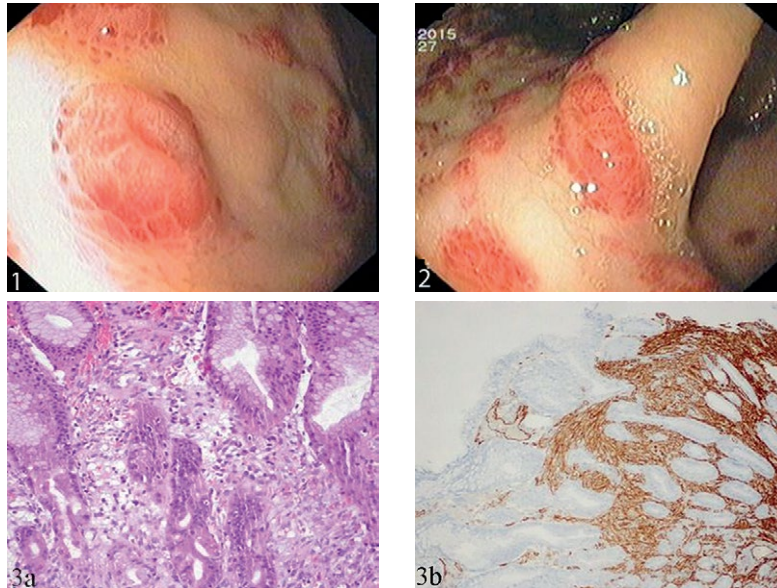


Gastric Kaposi Sarcoma in a Double Lung-Transplanted Patient

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A 35 year-old man was admitted due to asthenia and fever. His past medical history was remarkable for cystic fibrosis, being submitted to a bipulmonary transplant in 2010 due to severe bronchiectasis. He was under treatment with everolimus, tacrolimus, prednisone and prophylactic azithromycin. Blood analysis showed anemia (hemoglobin 6.8 g/dL), leukocytosis ($13.0 \times 10^9/L$), elevated C-Reactive Protein (145 mg/L) and renal dysfunction (creatinine 2.08 mg/dL, urea 126 mg/dL). A CT-scan showed signs of acute cholecystitis, and he was submitted to cholecystectomy and antibiotic treatment with imipenem.

Endoscopic investigation was performed due to the severe anemia. Upper endoscopy revealed multiple reddish, round and elevated lesions, some of them with central depression (Fig.1) in the incisura (Fig.2), body and fundus, highly suggestive of Kaposi Sarcoma (KS) lesions. Histological examination showed vascular proliferation (Fig. 3a, H&E x200), highlighted with immunochemistry for CD31, indicating cells of vascular/endothelial origin (Fig. 3b, x100) and multiple cells positive for Herpes 8 virus, thus confirming the diagnosis. Currently, the patient's clinical status precludes KS treatment.

In a large cohort of almost 200,000 transplanted patients [1], post-transplant malignancy (PTM) incidence was higher in lung-transplanted patients (19.8%) as compared to kidney, liver and heart transplant recipients. The main PTMs in pulmonary recipients were lung and bronchial cancers (5.94%), lymphoproliferative disorders (5.72%) and colorectal cancer (1.38%). The risk of PTM is especially high in malignancies caused by viral infections, such as lymphoproliferative disorders (Epstein-

Barr Virus), KS (Herpes-Virus 8), anogenital cancers (human papilloma virus) and liver cancer (hepatitis B or C viruses) [2]. Cyclosporine has been associated with a higher risk of developing KS; however, the use of tacrolimus instead of cyclosporine was associated with a higher mortality in transplanted patients once KS developed [3]. The majority of KSs in the post-transplant setting are described in renal recipients; gastric involvement in lung recipients seems to be exceedingly rare.

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REFERENCES

1. Sampaio MS, Cho YW, Qazi Y, Bunnapradist S, Hutchinson IV, Shah T. Posttransplant malignancies in solid organ adult recipients: an analysis of the U.S. National Transplant Database. *Transplantation* 2012; 94: 990-998. doi: [10.1097/TP.0b013e318270bc7b](https://doi.org/10.1097/TP.0b013e318270bc7b)
2. Engels EA, Pfeiffer RM, Fraumeni JF Jr, et al. Spectrum of cancer risk among US solid organ transplant recipients. *JAMA* 2011; 306: 1891-1901. doi: [10.1001/jama.2011.1592](https://doi.org/10.1001/jama.2011.1592)
3. D'Amico F, Fuxman C, Nachman F, et al. Visceral Kaposi's sarcoma remission after intestinal transplant. First case report and systematic literature review. *Transplantation* 2010; 90: 547-554. doi: [10.1097/TP.0b013e3181ea3936](https://doi.org/10.1097/TP.0b013e3181ea3936)