

# Gastrointestinal and Liver Pathology at Rush

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## Case of the Month Answer – February 2011

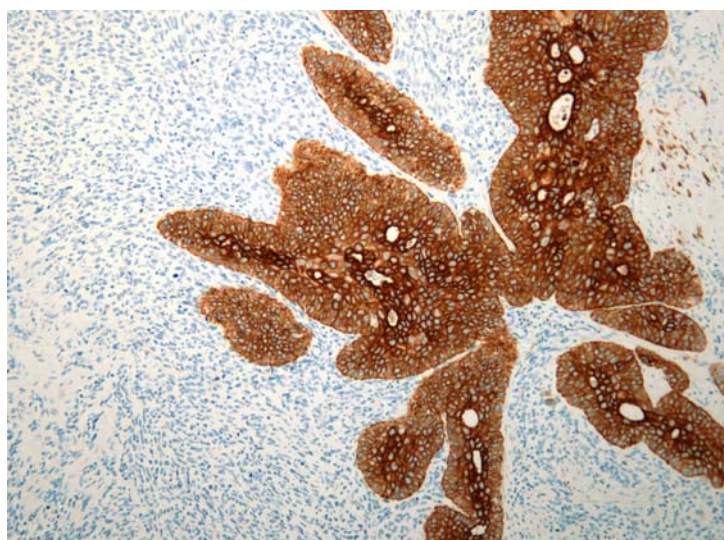
*Contributed by Drs. Michelle Collier and Shriram Jakate*

### **Diagnosis: Carcinosarcoma of the stomach**

Carcinosarcomas are found at different sites throughout the body and are named based on the tumor containing both a carcinoma and a sarcoma element. The malignant epithelial (carcinoma) component is usually adenocarcinoma, but may also be squamous or neuroendocrine. The malignant mesenchymal (sarcoma) component is often undifferentiated but may be osteosarcoma, chondrosarcoma, leiomyosarcoma, or rhabdomyosarcoma. One theory on the origin of these tumors is that a totipotential stem cell is responsible for both the epithelial and mesenchymal cell lines.

In the GI tract carcinosarcomas are rare, but when they do occur they are most commonly encountered in the esophagus. In the current literature about 50 gastric carcinosarcomas have been reported, mostly in men over the age of 60. They have been reported as being both exophytic and endophytic in appearance with overlying mucosal ulceration and clinically can be difficult to distinguish from gastric adenocarcinoma. A biopsy may only show either the carcinoma or sarcoma component. Gastrectomy is often performed in these patients. The prognosis is poor with a reported mean survival of 10-15 months.

In our case, the histology revealed a spindle cell component which is highly cellular with numerous mitotic figures and abundant necrosis, consistent with a high-grade sarcoma. Intermixed with the sarcomatous cells there are clearly malignant epithelial cells, in some areas forming glands with central necrosis and in others there is keratinization, giving a mixed adenocarcinoma and squamous cell carcinoma. Immunostains were performed and the spindle cells are negative for epithelial markers such as cytokeratin 8/18 and diffusely positive for vimentin, while the carcinoma cells are positive for cytokeratin 8/18 and negative for vimentin (see Figure A and B below).



**Figure A.** Immunostain for cytokeratin 8/18 highlights the epithelial (carcinoma) component.

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**Figure B. Immunostain for vimentin highlights the mesenchymal (sarcoma) component.**

## REFERENCES

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2. Kayaselcuk F, Tuncer I, Toyganozu Y, Bal N, Ozgur G. Carcinosarcoma of the stomach. *Pathol Oncol Res* 2002; **8**:275-277.
3. Tomislav Randjelovic, Branka Filipovic, Darko Babic, Vesna Cemerikic, Branislav Filipovic. Carcinosarcoma of the stomach: A case report and review of the literature. *World J Gastroenterol* 2007 November 7;13(41): 5533-5536.